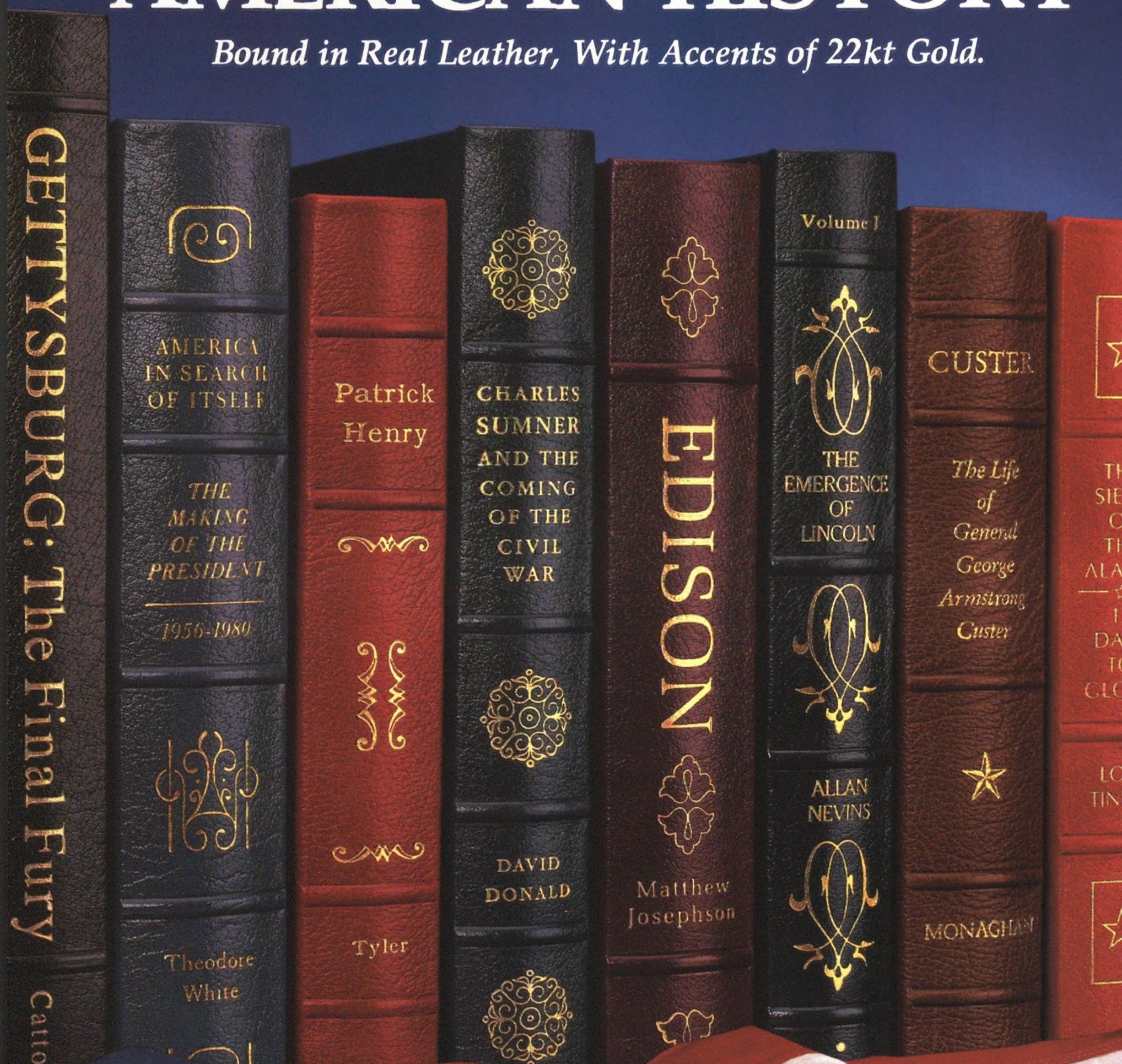
Smithsonian

January 1987

Watchful alligator lurks among the lily pads in the Everglades (p. 36)

The Leather-Bound Library of AMERICAN HISTORY

Bound in Real Leather, With Accents of 22kt Gold.



FEATURING:

the works of Pulitzer Prize-winning historians Bruce Catton, Theodore White, Allan Nevins, David Donald, Frederick Jackson Turner and others.

The greatest works of American History ever written, in the finest editions ever published!

One of the greatest assets we Americans possess is our heritage. It is a resource from which we draw ideas, inspiration, wisdom and strength. But few of us have been able to acquaint ourselves with the full richness of our history. Now you can! The Easton Press is proud to present *The Leather-Bound Library of American History — the greatest works of American History in the finest editions ever published.*

A great American library.

The Easton Press is gathering together — for the first time ever — towering works by Frederick Jackson Turner, Francis Parkman, Theodore White, Bruce Catton, Allan Nevins, Matthew Josephson, Arthur Schlesinger, Jr., David Donald and many others. These will be published in magnificent leather-bound editions with accents of 22kt gold. *The greatest library of American History ever produced!*

With the expert advice of authors and historians, we have selected the greatest works on America's past. Many of these works would be extremely difficult to find. Many have a wealth of historic photographs, maps, documents and paintings. Now these works will be gathered together and preserved for posterity in a single permanent collection. You have an unprecedented opportunity to share in the richness of America's heritage.

The sweep of history!

The Leather-Bound Library of American History brings together many different works by different writers, each an authority on a particular era, topic or historical figure.

These are the most acclaimed, most honored works of history — books that won the Pulitzer Prize, the National Book Award, the Bancroft and Francis Parkman prizes for history.

There will be classics of the West ... *The Oregon Trail* ... *The Journals* of Lewis and Clark ... *The Frontier in American History.*

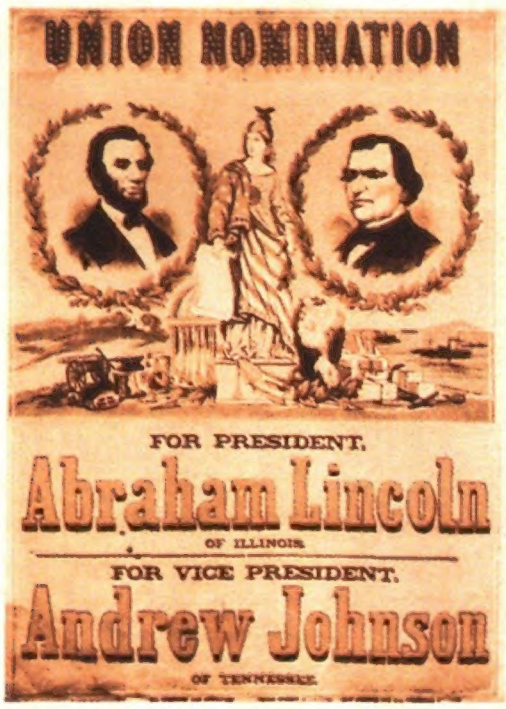
The battlefields of our past ... *13 Days to Glory* remembers the Alamo ... Bruce Catton's *Gettysburg,* the greatest book on the greatest battle of the Civil War ... *The Longest Day,* Cornelius Ryan's account of D-Day, the greatest invasion ever mounted.

The role of great Americans ... *The Emergence of Lincoln* ... *Edison: A Biography* ... *Woodrow Wilson and the Progressive Era* ... as well as others ... Patrick Henry, Roosevelt, Custer, MacArthur, Carnegie, and the list goes on.

Into the twentieth century ... *Prohibition: The Era of Excess* ... *The Great Crash, 1929* ... and right up to the present ... *America in Search of Itself* by Theodore White — a journalist's first-hand account of the Presidential elections from Eisenhower to Reagan.

And these are just a few of the volumes!

(continued on next page.)



From the birth of a new nation to landing on the moon.

HERE IS THE ENTIRE SWEEP OF AMERICAN HISTORY ...

The Revolution ... The First Continental Congress ... The Declaration of Independence ... Forging the Constitution ...

The Battlefields of Our Past ... Valley Forge ... The Alamo ... Gettysburg ... Pearl Harbor ... The D-Day Invasion ...

The Classics of the West ... Lewis & Clark ... The Gold Rush ... The Pony Express ... Building the Railroads ...

The Great Americans ... George Washington... Teddy Roosevelt ... Douglas MacArthur ... Andrew Carnegie ... Abraham Lincoln ... Daniel Boone ... Thomas Edison ... Paul Revere ...

And Much More ...

The D-Day invasion is chronicled by Cornelius Ryan in the unforgettable saga of **The Longest Day**.

In **The Emergence of Lincoln**, Allan Nevins vividly recounts the fateful events leading to the Civil War.

Prohibition: The Era of Excess, by Andrew Sinclair, is the first comprehensive study of the period.

"Remember the Alamo" with **13 Days to Glory** by Lon Tinkle.

General George Armstrong Custer, one of the most controversial figures in our history, is revealed by Jay Monaghan.

The New York Times.
LUSITANIA SUNK BY A SUBMARINE, PROBABLY 1,000 DEAD; TWICE TORPEDOED OFF IRISH COAST; SINKS IN 15 MINUTES; AMERICANS ABOARD INCLUDED VANDERBILT AND FROHMAN; WASHINGTON BELIEVES THAT A GRAVE CRISIS IS AT HAND

Thomas Alva Edison, the great hero of invention, is brilliantly portrayed in Matthew Josephson's biography.

Some of the historical photographs were provided courtesy of Bettmann Archive.

★ ★ ★

Beautiful genuine leather editions with accents of 22kt gold.

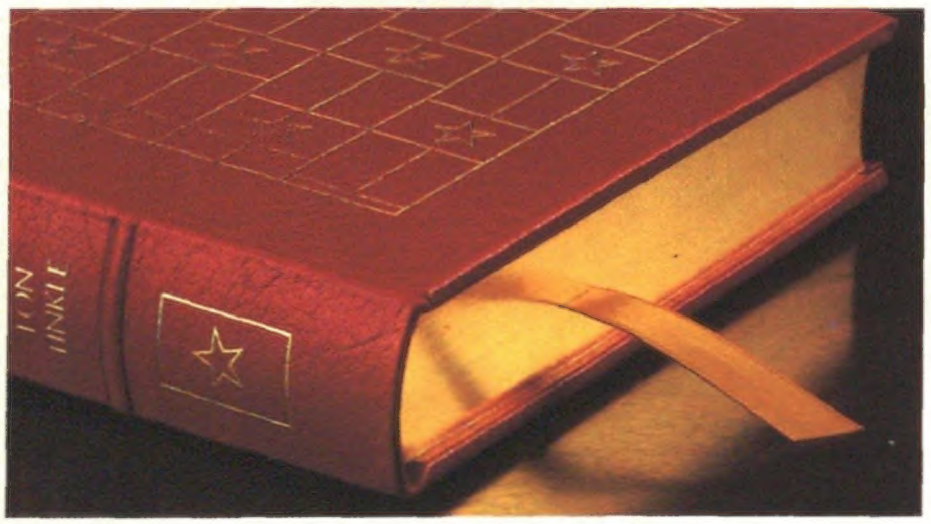
(continued from previous page)

The Easton Press is famous for the quality of its fine editions. Each volume in this collection will be fully bound in luxurious genuine leather. The spine of each book will be "hubbed" in the finest tradition of quality book binding and decorated with precious 22kt gold.

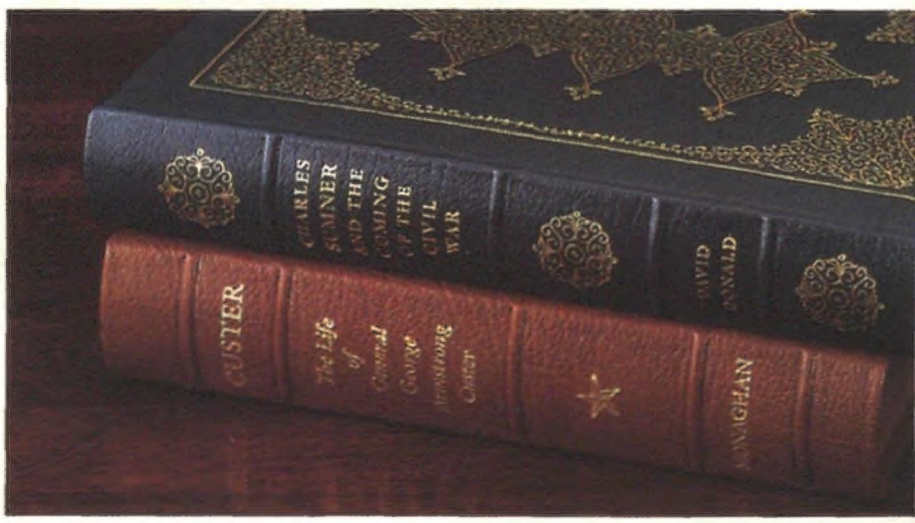
Each volume in this collection will be the pride of dozens of skilled and dedicated craftsmen. Only the finest materials — genuine leather, acid-free paper, 22kt gold — will be put into the hands of the finest tanners, printers and binders. The fine leathers will be cut by hand. Talented artists will create original cover designs and professional die cutters will hand-finish the brass stamping dies.

Don't confuse these masterful editions with the many poor imitations available today. Easton Press books are *fine editions* ... large and beautiful, *fully bound in genuine leather*.

You will recognize the outstanding quality immediately. These are books to be treasured. These are books made as they should be ... no short cuts, no compromises, no substitute materials.



Pages will be gilded along all three edges and each book will have a permanent ribbon page marker.


CHARLES SUMNER AND THE COMING OF THE CIVIL WAR
DAVID DONALD
CUSTER
The Life of General George Armstrong Custer
MONAGHAN

Each volume will be fully bound in real leather. The hubbed spine will be decorated with precious 22kt gold.

How to make your reservation.

The Leather-Bound Library of American History is available only by reservation, directly from The Easton Press. The favorable price of just $34.50 is guaranteed for two full years, subject thereafter only to minor adjustments reflecting the cost of materials. You may return any volume within 30 days for a refund. And you may cancel your subscription at any time.

To reserve a collection simply complete the Reservation Application and return it to The Easton Press. You will receive one volume per month and be billed separately for each one. As a convenience, you may have each volume charged, when it is shipped, to your credit card.

RESERVATION APPLICATION

The Easton Press
47 Richards Avenue
Norwalk, Conn. 06857

Send no money now.
Bill me later.

The Leather-Bound Library of AMERICAN HISTORY

301

Please enroll my subscription to *The Leather-Bound Library of American History*. Send me the first volume and reserve a collection in my name. Further volumes will be sent at the rate of one book per month at $34.50 (plus $2.50 shipping and handling). This price will be guaranteed to me for two full years.

I understand that I may return any book within 30 days for a refund, and that either party may cancel this subscription agreement at any time.

☐ As a convenience, I enclose $37.00* ($34.50 plus $2.50 shipping and handling) — payable to Easton Press — for my first volume.

☐ Please charge my books to my credit card when they are shipped.

☐ VISA ☐ MasterCard

Credit Card No. _____ Expiration Date _____

Conn. residents pay $39.78 to include sales tax.

Name _____

Address _____

City _____

State _____ Zip _____

Signature _____

(All applications subject to acceptance)

Please allow 8–10 weeks for shipment.

January 1987

Smithsonian

Volume 17, Number 10

Table of Contents

Cover: Along the Anhinga Trail in Everglades National Park, a big gator keeps an eye out for unwary prey (p. 36)
Photograph by Patricia Caulfield

12 *Smithsonian horizons* by Secretary Adams
14 *Letters to the Editor*
18 *Picture credits*
22 *Around the Mall and beyond* by Edwards Park
30 *Phenomena, comment and notes* by John P. Wiley jr.

36 **Old Bigtooth returns**
Not long ago the alligator was on the endangered-species list, but today he's back and going strong
By Donald Dale Jackson

50 **An art-filled villa moves to Texas**
The Reves Collection, complete with its French setting, has a new home in the Dallas Museum of Art
By Helen Dudar

62 **Revival of the coldest craft**
Building castles out of ice is chilly work, but we've been hard at it for more than two centuries
By Fred Anderes and Ann Agranoff

72 **The greening of urban civilization**
From Angkor to Manhattan, plants silently take hold wherever they can find a tiny niche
By Donald Perry, with Sylvia Merschel

82 **The big balloons of Palestine, Texas**
From this research facility, huge helium-filled plastic bags carry experiments into the stratosphere
By James R. Chiles

96 **In search of Spanish treasure**
Scores of booty-laden galleons never made it back to Spain; people have been seeking them ever since
By Bryce S. Walker
Illustrations by Arthur Shilstone

106 **Bouquets from the sea**
Jaqui Manoff transforms seashells into flowers so realistic you can almost smell them
By Glen B. Ruh, photographs by Aldo Tutino

112 **Fighting back against Babel babble**
Esperanto enthusiasts have been trying to clean up our language mess for 100 years; they haven't quit yet
By Israel Shenker
Illustrations by John Huehnergarth

126 *Book reviews*
131 *Additional reading*
133 *January events at the Smithsonian*
138 *Smithsonian tours and seminars*

140 **The cat wouldn't admit her mistakes**
By Donald Dale Jackson

Smithsonian (ISSN 0037-7333) is published monthly by the Smithsonian Associates, 900 Jefferson Drive, Washington, DC 20560.
©Smithsonian Institution 1986. All rights reserved.
Reproduction in whole or in part without permission is prohibited.
Subscription price $20 a year in U.S. possessions, $30 elsewhere.
80 percent of dues is designated for magazine subscription. Single copy price, $2.50. Second-class postage paid at Washington, DC, and additional entry points.
Editorial offices, 900 Jefferson Drive, Washington, DC 20560.
Advertising and circulation offices at 420 Lexington Ave., New York, NY 10170.
Members: Please address all subscription correspondence and change of address information to P.O. Box 2955, Boulder, CO 80322.
Postmaster: Send 3579s to P.O. Box 2955, Boulder, CO 80302.

In a world of computers, robotics and electronics, Buick is still very good at golf clubs, suitcases and grown-up bodies.

No matter how high-tech the world becomes, when you get behind the wheel of your car, you are still facing the same old low-tech realities: unfilled potholes, unrelenting traffic and unacceptable weather.

So the engineers take a slightly different view when applying advanced technology to today's Buicks. Instead of trying to impress you with gadgetry, they use technology to enhance the qualities that really matter, the qualities for which Buicks have long been famous: comfort, convenience — and a unique sense of solidity.

With its aerodynamic shape, front-wheel-drive design, fully independent suspension and 3.8-litre V-6 engine with sequential-port fuel injection, the LeSabre Sedan is the very model of advanced engineering.

Buick Skylark

Yet this LeSabre follows consistently in the tradition of big Buicks: it offers, without disclaimer, plenty of room for six fully grown adults.

The obviously plush seats are designed with full-foam construction, to make them supportive as well as comfortable.

And the trunk offers 16.4 cubic feet of genuinely usable space. In a smaller but still commodious

Buick LeSabre Sedan

Skylark, you will find complete electronic instrumentation with digital readouts. These advanced electronics are not intended to dazzle you, but to inform you. Instead of studying your speedometer, for example, one glance shows your speed in large, easy-to-read numbers.

Buick Century

The Century is another solid example of technology applied to real-life needs. Built with the aid of robots, the Century is not only an elegant choice, it is one that so many people rely on. The Century is, in fact, one of the best-selling cars in America.

Throughout the Buick line, you will find many, many examples of advanced technology applied to the things that really matter: your comfort and convenience.

Buckle up and visit your Buick dealer. For more information, a brochure or a test drive, call: 1-800-87-BUICK (1-800-872-8425).

Where better really matters.

B U I C K

Omaha Steaks International®

Try a little tenderness

Now there's an easy way to make those special occasions truly memorable! Just try a little tenderness.

Candlelight...soft music...and...magnificent, aged Omaha Steaks. Tender, luscious, corn-fed beef with extraordinary flavor. Perfect.

Experts prepare each filet from the finest beef tenderloins. Their artistry in cutting and aging is your assurance of the utmost in enjoyment.

Your steaks will arrive frozen in a reusable picnic cooler. We guarantee your complete satisfaction. Order today! **INTRODUCTORY OFFER:**

Six 6 oz. Filet Mignons, 1¼" thick (reg. $52.95) $29.95
(plus $4.50 shipping/handling)

YOU SAVE $23.00! VALID IN 48 STATES UNTIL JAN. 31, 1987.

OR SAVE EVEN MORE...

Twelve 6 oz. Filet Mignons at the extra special price of $58.95
(plus $4.50 shipping/handling)

LIMIT OF 2 PACKAGES PER ORDER

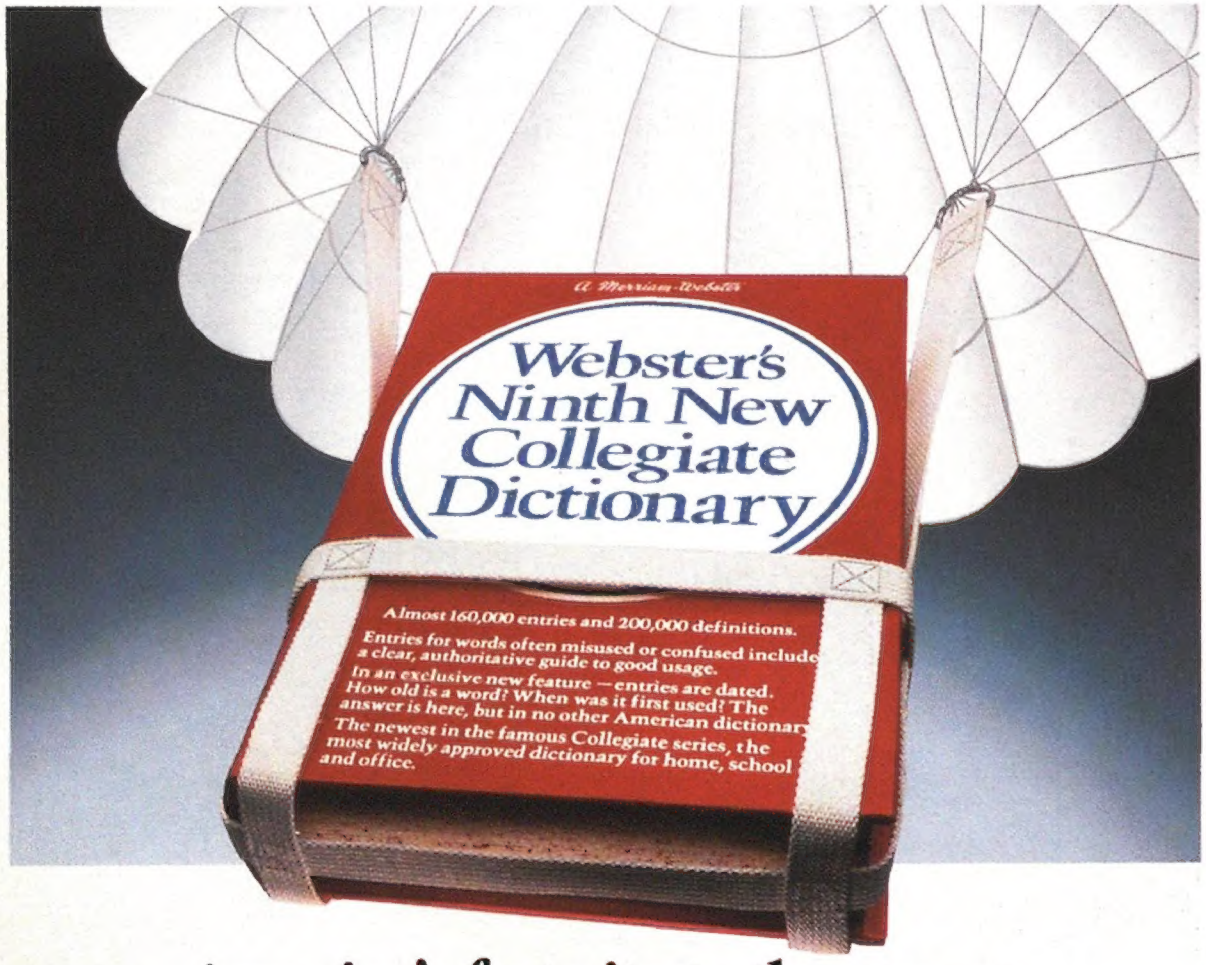
"Your Filet Mignons are fabulous. I'll never buy meat from a supermarket again!"
Mary Massena
Syracuse, NY

FREE WITH YOUR ORDER...The Omaha Steaks Cookbook, filled with easy-to-follow cooking instructions, helpful storing and serving hints, and recipes by James Beard, World Famous Food Authority. Also, a colorful catalog of gourmet treats with a 10% discount coupon for use with your first catalog order. **Order today or write for FREE catalog and 10% discount coupon.**

Omaha Steaks International® Since 1917

Use major credit card and ..... **Call Free 1-800-228-9055** (In Nebraska phone 0-402-391-3660 collect)

or write to: Dept. 1861, P.O. Box 3300 • Omaha, Nebraska 68103


Webster's Ninth New Collegiate Dictionary
Almost 160,000 entries and 200,000 definitions.
Entries for words often misused or confused include a clear, authoritative guide to good usage.
In an exclusive new feature — entries are dated. How old is a word? When was it first used? The answer is here, but in no other American dictionary.
The newest in the famous Collegiate series, the most widely approved dictionary for home, school and office.

America's favorite to the rescue.

No other dictionary responds to so many calls for help–how to spell it, how to say it, how to use it. And it's the only dictionary to tell you how old a word is.

A Genuine Merriam-Webster®

More people take our word for it.

© Merriam-Webster 1985

Smithsonian

SECRETARY OF THE SMITHSONIAN INSTITUTION:
Robert McC. Adams

EDITOR:
Don Moser

EXECUTIVE EDITOR:
Ralph Backlund

BOARD OF EDITORS:
Jim Doherty
Timothy Foote
Bennett Schiff
Nancy Seaman
Paul Trachtman
John P. Wiley jr.
Caroline Despard, Pictures

ASSOCIATE EDITORS:
Diane M. Bolz
Constance A. Bond
Frances R. Glennon
Marlane A. Liddell
Jane D. Scholl
Edgar Rich, Pictures

ASSISTANT EDITORS:
Susana Barañano
Kathleen M. Burke
Judy Harkison
Bruce F. Hathaway
W. Eric Keller
Ruth Ravenel, Pictures

EDITORIAL ASSISTANT:
Charlene Mason

CONTRIBUTING EDITORS:
Edwards Park
Richard L. Williams

PUBLISHER:
Joseph J. Bonsignore

ADVERTISING:
Thomas H. Black, Associate Publisher
Edward A. Daly, Manager
Robert F. Donovan, Associate Manager
Frederick T. Lyons, Eastern Manager

CIRCULATION:
John O'Donnell, Director
Adeline Sherr, Associate Director

ADMINISTRATION:
Carey O. Randall, Associate Publisher
Mary Ellen Bobb, Business Manager
Valerie Martin

PRODUCTION:
E. Cherry Doyle, Director
Mary D. Haskin, Advertising Production
Greg Williams, Quality Control

FOUNDER:
S. Dillon Ripley

EDITOR AND PUBLISHER EMERITUS:
Edward K. Thompson

SENIOR CIRCULATION CONSULTANT:
Anne Keating

The Fine Art of Finance

The year is 1885. Working in an atmosphere of quiet concentration, American Bank Note Company master engraver James Smillie patiently carves minute dots and lines into his last engraving entitled "Lion at Home". Smillie is charged with the task of cutting into polished steel a delicate mirror image of a lioness at rest with her cubs, using hand tools to recreate renowned artist Rosa Bonheur's painting, "A Family of Lions". One slip of his graver, one false cut, and he must start afresh with a blank piece of steel.

Week after week, month after month, Smillie "works up" the image—cutting into the polished steel die a thousandth of an inch at a time, to create the deep cuts and light hairlines that will become the printed lines and faintest highlights of the finished vignette. But Smillie's health is failing. He enlists the help of his son, James David, also a master engraver, to finish the beloved engraving for him. The result is an exquisite example of an American art form that flourished only to serve commerce... the "Fine Art of Finance." For want of a more romantic name, it is called "security engraving", and it embraces all the imagery used to decorate the country's bank notes, stocks, bonds, scrip, checks, and stamps. The security engraver's primary task was pragmatic: to prevent counterfeiting of these financial documents through the intricacy of design.

Security engravers such as Smillie worked painstakingly to create a decorative pictorial history of 19th century America—locomotives and clipper ships, bridges and mine shafts, Indians and cattlemen. They devised exquisite versions of the patriotic symbols of the new and growing nation. They produced eagles and flags, portraits of financiers, statesmen, and military heroes. And they captured the nation's wildlife—from the magnificent stag to the great grizzlies of the western ranges.

LIMITED EDITION

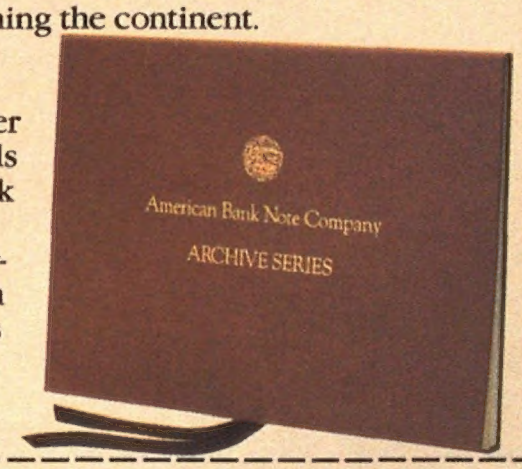
American Bank Note Company, the world's most prestigious security printer for whom these vignettes were produced over 100 years ago, now offers the collector a rare glimpse into its vaults which contain thousands of these priceless engraved treasures. For the first time ever, these beautiful engravings have been intaglio-printed from the original steel dies, and showcased in *The American Bank Note Company Archive Series*—a limited edition collection of 12 steel-engraved 8½"x11¼" sheets, displaying original vignettes of American life in the 19th and early 20th centuries.

Each sheet displays a minimum of three and a maximum of ten distinctive engravings, and is devoted to a unique facet of early American life. The series chronicles the birth of our great nation in magnificent engravings... from the Battle of Bunker Hill and the signing of the Declaration of Independence to the building of the mighty railroads spanning the continent.

"THE FEEL OF STEEL"

Each vignette sheet is intaglio printed—the finest form of printing known to man. The paper is forced into the plate under 90 tons of pressure per square inch to pick up the ink that fills each cut—a process that results in "the feel of steel", the same process the American Bank Note Company has used to produce currency for virtually every nation in the world.

In addition to the 12 frameable vignette sheets, you will receive 12 corresponding historical data sheets which include the information the American Bank Note Company holds on the original master engravers, dates of origin, and the financial documents on which the engravings have appeared. You will receive three shipments of 4 steel-engraved vignette sheets and 4 corresponding data sheets (shipped approximately 6 to 8 weeks apart).



The vignette and data sheets will be protected by the handsome *American Bank Note Company Archive Series* Portfolio, especially designed to preserve your limited edition for years to come. **The beautiful Archive Series Portfolio, a $30.00 value, is our gift to you, FREE, with your prepaid subscription.**

The important first issue of *The American Bank Note Company Archive Series* is available by subscription only. By entering your subscription now, you and your family can share in this valuable limited edition series at the guaranteed 1987 price of $150. Simply return the accompanying application by the reservation closing date of February 28, 1987.

American Bank Note Company is a subsidiary of International Banknote Company.

THE AMERICAN BANK NOTE COMPANY ARCHIVE SERIES

Please enter my subscription for the 1987 *American Bank Note Company Archive Series*. I understand I will receive one shipment of 4 vignette and 4 data sheets approximately once every other month, for a total of 3 shipments.

Method of payment:

☐ Direct. I enclose a check or money order for $150* as full payment. I will receive the *Archive Series* Portfolio FREE with my first shipment.

☐ Credit card. Charge the full amount of $150* to my credit card indicated below and send my FREE Portfolio with my first shipment. ☐ MasterCard ☐ Visa

Credit card #:_____ Expiration date:_____

Authorized signature:_____
(All applications are subject to acceptance.)

Mr./Mrs./Ms._____
(Please type or print clearly.)

Address_____

City_____ State_____ Zip_____

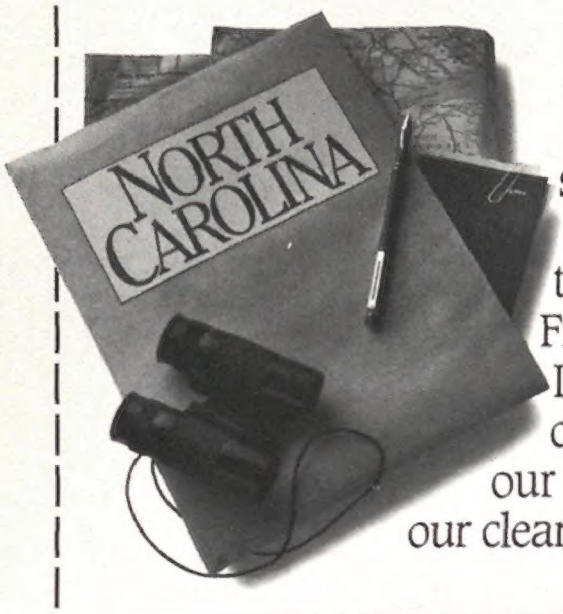
*Add $7.50 shipping and handling (covers 3 shipments). N.Y. residents add applicable sales tax. Foreign orders enclose $15.00 U.S. for shipping and handling.

Allow 6 to 8 weeks after payment for initial shipment. Make checks payable to the American Bank Note Company.

YOUR APPLICATION MUST BE POSTMARKED BY FEBRUARY 28, 1987.

American Bank Note Company, Archive Series Program
Post Office Box 3, Bowling Green Station, New York, N.Y. 10274

How To Find Comfort, Friendship, Harmony And Trust.



Send this coupon. And we'll send you a free North Carolina travel package, including a map that will help you find Comfort, Friendship, Harmony, Trust, Loafer's Glory, Duck, and dozens of other surprising places, from our mountains to our midlands to our clean, uncrowded beaches.

Name

Address

City *State* *Zip*

Free North Carolina Travel Package

Mail to: North Carolina Travel, Department 615, Raleigh, North Carolina 27699
Or call toll-free (weekdays 8 am to 5 pm): 1-800-VISIT NC, Operator 615.
North Carolina is the site of the U.S. Olympic Festival, July 1987.

An outstanding watch value: on land, at sea, and underwater . . .

Navigator™ Watch

Now, with new ratcheted safety bezel, and still only $49.95*

But read the ad for an even better deal!

Wear this watch to work, to play, to swim and dive — and to rally. The *Navigator™ Watch* is powered by a sophisticated, ultra-accurate Japanese quartz movement that is powered by a tiny mercury cell. It should last at least 18 months before you need replace it. The *Navigator™* has *both* luminous analog dial *and* LCD display. It gives you dual time capability. The LCD display shows time continuously — in 12-hr. or 24-hr. mode. Push the button and you display day and date. There is a subtle yet insistent alarm and a switchable hourly time signal. The stopwatch/chronograph reads to 1/100 secs. and has "interrupt" and "lap" modes. A light switch illuminates the display.

The *Navigator™ Watch* is totally executed in black metal, including the linked, stainless steel band. It is waterproof to 150 ft. The new, exclusive ratcheted safety bezel prevents you from staying underwater longer than you had planned. The crystal is "mineral glass"—it will never scratch.

We import these outstanding watches directly in large quantities and are able to offer them for just $49.95. National catalog houses offer the identical watch for $120 or more, and that's *without* the exclusive safety bezel. But here is an even better deal: ***Buy two for $99.90, and we'll send you a third one absolutely FREE, with our compliments.*** Take advantage of this outstanding offer while it is available.

•Many successful products are being "knocked off" to the detriment of consumers. The *Navigator™* is no exception. Beware of *similar looking* imitations. There is only one genuine *Navigator™ Watch*!

FOR FASTEST SERVICE, ORDER
TOLL FREE (800) 431-9003
24 hours a day, 7 days a week

Please give order **#1015B811.** If you prefer, mail check or card authorization and expiration. We need daytime phone for all orders and issuing bank for charge orders. We cannot ship without this information. UPS/insurance: $5.95 for one *Navigator™ Watch*, $6.95 for three. Add sales tax for CA delivery. You have 30-day return and one year warranty.

Note: For quantity orders (100+), with your company logo on the dial, call Mr. Ernest Gerard at (415) 543-6570 or write him at the address below.

since 1967
haverhills
131 Townsend Street, San Francisco, CA 94107

Smithsonian

Board of Regents
Smithsonian Institution

Ex Officio
Chief Justice of the United States
William H. Rehnquist, Chancellor
Vice President of the United States
George H. W. Bush

Appointed by the President of the Senate
Honorable E. J. (Jake) Garn
Honorable Barry M. Goldwater
Honorable James R. Sasser

Appointed by the Speaker of the House
Honorable Edward P. Boland
Honorable Silvio O. Conte
Honorable Norman Y. Mineta

Appointed by Joint Resolution of Congress
Honorable David C. Acheson
Honorable Anne L. Armstrong
Dr. William G. Bowen
Mrs. Jeannine Smith Clark
Dr. Murray Gell-Mann
Honorable A. Leon Higginbotham jr.
Mr. Carlisle H. Humelsine
Mr. Samuel C. Johnson
Mr. Barnabas McHenry

National Board of the
Smithsonian Associates

Mr. Charles D. Dickey jr., Chairman
Mrs. Joe L. Allbritton
Mr. Arthur G. Altschul
Mr. Philip F. Anschutz
Mr. Perry R. Bass
Honorable Lucius D. Battle
Mr. George B. Bingham jr.
Mr. William W. Boeschenstein
Mrs. I. Townsend Burden III
Mr. Frank T. Cary
Mr. James H. Clement
Mr. Jeffrey A. Cole
Mrs. Robert Donner jr.
Mr. Marshall Field
Mr. W. L. Hadley Griffin
Mr. Gerald D. Hines
Mr. S. Charles Kemp
Mr. Thomas M. Keresey
Mr. Howard M. Love
Mr. Brooks McCormick
Mr. Alexander K. McLanahan
Mr. Arjay Miller
Mr. Charles H. Murphy jr.
Mr. Jack S. Parker
Mr. Sidney R. Petersen
Mr. Charles W. Schmidt
Mrs. George M. Seignious II
Mrs. Edson W. Spencer
Mr. Malcolm T. Stamper
Mrs. James M. Walton
Honorable John C. Whitehead
Mr. J. Tylee Wilson
Mrs. Peter G. Wray

Honorary Members
Mr. William S. Anderson
Mr. Richard P. Cooley
Mr. Joseph F. Cullman III
Honorable Leonard K. Firestone
Mr. Alfred C. Glassell jr.
Honorable William A. Hewitt
Mr. James M. Kemper jr.
Mr. Seymour H. Knox III
Mr. Lewis A. Lapham
Honorable George C. McGhee
Justice Sandra D. O'Connor
Mr. S. Dillon Ripley
Mr. Francis C. Rooney jr.
Mr. Merritt Kirk Ruddock
Honorable Thomas J. Watson jr.

A Magnificent Tribute to America's Most Beloved Species of Duck, the Common Mallard

• Edition limit: 15,000

• Actual size: 7½" in height

It is a scene we could observe in any park or wetland. A peaceful calm is broken by the sound of wings beating water, and we turn our heads to see a brightly-colored Mallard drake as it prepares to take wing.

Now the beauty of this scene is captured forever in hand-painted porcelain by Carol Werner Burgues of the famed Burgues Studios. The Hamilton Collection is proud to introduce her "Common Mallard," a breathtaking tribute to America's most beloved duck species.

Months of research preceded Carol Werner Burgues' completion of the original master sculpture, which was used to create eight separate model parts.

Now, after molding, casting and assembling these components—all by hand and using only the finest bisque porcelain—each piece will be carefully fired and hand-painted by skilled artisans in the Republic of China. Thus, because of the elaborate craftsmanship involved, this Burgues original has been limited to an edition of just 15,000 worldwide.

By Carol Werner
Burgues

This sculpture premieres a series of eight figurines entitled the *North American Ducks* Collection. As an owner of "Common Mallard" you will have the right—*but never the obligation*—to acquire all future issues as they become available. Furthermore, you are guaranteed the right to return any sculpture within 30 days of receipt for a full refund.

Astute collectors will be pleased to note that each issue in the *North American Ducks* Collection will be priced at just $95.00, and may be purchased through a convenient, payment plan.

Considering the exceptional quality and appeal of this "Common Mallard" original, as well as the international reputation of artist Carol Werner Burgues, a prompt sellout of the edition could occur. Thus, to avoid disappointment, order *today!*

©1987 HC

RESPOND BY: **January 31, 1987**

Limit: One sculpture per collector

Please accept my application for "Common Mallard," by Carol Werner Burgues. The issue price of $95.00 (plus $2.88 shipping & handling) is payable in four equal installments, with the first due prior to shipment. I prefer to pay the first installment of $24.47* as follows:

☐ I enclose my check or money order.
☐ Charge my credit card: ☐ Diners Club ☐ Visa ☐ MasterCard ☐ Amer. Exp.

Acct. No. _____

Exp. Date _____ 002447 12112

Name _____

Address _____

City _____

State _____ Zip _____

Signature _____

All applications must be signed and are subject to acceptance. ***FL residents add $1.23 and IL residents add $1.72 for tax.*** *Please allow 6–8 weeks for delivery. Deliveries made only to the U.S. and its territories.*

The Hamilton Collection
9550 Regency Square Blvd., P.O. Box 44051
Jacksonville, FL 32231

TURN A DOLLAR INTO A GREAT CLASSICAL COLLECTION

BACH

331488-391482. Bach: Brandenburg Concertos, 1 to 6 (complete)—Kapp, Philharmonia Virtuosi of New York (Counts as 2—*Digital*—CBS Masterworks)

336578-396572. Bach: Flute Sonatas—Rampal, Pinnock (Counts as 2—*Digital*—CBS Masterworks)

343251. Bach: Goldberg Variations—Glenn Gould *(Digital*—CBS Masterworks)

330647. Bach: Unaccompanied Cello Suites 1, 2—performed by Yo-Yo Ma *(Digital*—CBS Masterworks)

345538-395533. Bach: Four Orchestral Suites—Marriner, Academy of St. Martin (Counts as 2—*Digital*—Angel)

171504. Switched-On Bach. Wendy Carlos' all-time best-seller! (CBS Masterworks)

BEETHOVEN

345546. Beethoven: Cello Sonata No. 4; Variations—Yo-Yo Ma and Emanuel Ax *(Digital*—CBS Masterworks)

273409. Beethoven: Three Favorite Piano Sonatas—Moonlight, Appassionata, Pathetique. V. Horowitz, piano (CBS Masterworks)

338004-398008. Beethoven Piano Sonatas—Moonlight, Appassionata, Tempest, 3 more. A. Brendel (Counts as 2—Vox Cum Laude)

345199. Beethoven: Overtures (*Egmont; Fidelio; Leonore 1, 3;* etc.)—Colin Davis, Bavarian Radio Orch. *(Digital*—CBS Masterworks)

232496. Beethoven: Symphony No. 3 (Eroica)—Bernstein and New York Philharmonic (Columbia)

321570. Beethoven: Symphony No. 5; Schubert: Symph. No. 8 (Unfinished)—Maazel, Vienna Philhar. *(Digital*—CBS Masterworks)

331108. Beethoven: Symphony No. 7 (original chamber version)—M. Tilson Thomas, English Chamber Orch. (CBS Masterworks)

252874. Beethoven: Symphony No. 9 (Choral)—Eugene Ormandy and the Philadelphia Orchestra. (Columbia)

342667. Beethoven: Piano Concertos No. 3 & 4—Perahia; Haitink, Amsterdam Concertgebouw *(Digital*—CBS Masterworks)

344119. Beethoven and Mozart: Quintets For Piano & Winds—Perahia, soloists, English Chamber *(Digital*—CBS Masterworks)

341982-391987. Beethoven: Sonatas for Piano & Violin, Vol. 1—Eugene Istomin & Isaac Stern (Counts as 2—*Digital*—CBS Masterworks)

349134-399139. Beethoven: Sonatas for Piano & Violin, Vol. 2—Eugene Istomin & Isaac Stern (Counts as 2—*Digital*—CBS Masterworks)

327221. Beethoven: Violin Concerto—Menuhin: Masur, Leipzig Gewandhaus *(Digital*—Angel)

BRAHMS

346833. Brahms: Ballades, Op. 10; Rhapsodies, Op. 79—Glenn Gould, piano *(Digital*—CBS Masterworks)

341107. Brahms: Double Concerto—Menuhin; Tortelier; Berglund, London Phil. *(Digital*—Angel)

334243. Brahms: Piano Concerto No. 1—Weissenberg, Muti, Philadelphia Orch. *(Digital*—Angel)

347369. Brahms: Hungarian Dances—pianists Michel Beroff & Jean-Philippe Collard (Angel Master Series)

345561. Brahms-Schoenberg: Piano Quartet, Op. 25; Bach-Schoenberg: 2 Choral Preludes—M. Tilson Thomas, Bavarian Radio Orchestra *(Digital*—CBS Masterworks)

332668. Brahms: Symphony No. 1—Tennstedt and London Philharmonic Orch. *(Digital*—Angel)

349605-399600. Brahms: Sonatas for Violin & Piano; Scherzo; etc—I. Perlman & V. Ashkenazy (Counts as 2—*Digital*—Angel)

330118. Brahms: String Quintets, Op. 88 & 111—Boston Symph. Chamber Players *(Digital*—Nonesuch)

341198. Brahms: String Quartets Nos. 1 & 3—The Tokyo String Quartet *(Digital*—Vox Cum Laude)

344499-394494. Brahms: A German Requiem; Alto Rhapsody; etc.—soloists, London Philharmonic under Klaus Tennstedt (Counts as 2—*Digital*—Angel)

CHOPIN

343103. Chopin: The Four Ballades; Sonata No. 2 (Funeral March)—Andrei Gavrilov *(Digital*—Angel)

343152-393157. Chopin: Nocturnes—Abbey Simon at the piano (Counts as 2—Vox Cum Laude)

330100. Chopin: Piano Concerto No. 2; Saint-Saens: Piano Concerto No. 2—Cecile Licad, piano; Andre Previn, London Philharmonic *(Digital*—CBS Masterworks)

343111. Chopin: Scherzo #2; Fantasie; Ballade #1; Three Nocturnes—Youri Egorov, piano *(Digital*—Angel)

DEBUSSY

346338. Debussy & Ravel String Quartets—Alban Berg Quar. *(Digital*—Angel)

340638-390633. Debussy: Preludes, Books I, II; etc. Youri Egorov (Counts as 2—*Digital*—Angel)

335679. Debussy: La Mer; Nocturnes—Andre Previn, cond. London Symphony *(Digital*—Angel)

304931. Debussy: Images For Orchestra; Prelude To An Afternoon Of A Faun—Previn, London Symph. *(Digital*—Angel)

MAHLER

334508. Mahler: Symphony No. 1 (Titan)—Riccardo Muti conducting the Philadelphia Orchestra *(Digital*—Angel)

329094-399097. Mahler: Symphony No. 2 (Resurrection)—Lorin Maazel, Vienna Phil. (Counts as 2—*Digital*—CBS Masterworks)

317685. Mahler: Symphony No. 4—Ameling; Previn, Pittsburgh Sym. (Angel)

349274-399279. Mahler: Symphonies Nos. 9 & 10 (Adagio)—Lorin Maazel & Vienna Phil. (Counts as 2—*Digital*—CBS Masterworks)

MENDELSSOHN

330142. Mendelssohn: Violin Concerto; Saint-Saens: Concerto No. 3—Cho-Liang Lin, violinist; Thomas, Philharmonia Orch. *(Digital*—CBS Masterworks)

332056. Mendelssohn: A Midsummer Night's Dream; Scherzo (from Octet Op. 20)—David Zinman and Rochester Philharmonic *(Digital*—Vox Cum Laude)

MOZART

344101. Mozart: Symphonies Nos. 38 & 39—Neville Marriner, Academy of St. Martin (Digital—Angel)

328740. Mozart: Piano Concerto 26 (Coronation); **Rondos**—Murray Perahia, English Chamber Orchestra *(Digital*—CBS Masterworks)

341628-391623. Mozart: Sonatas For Fortepiano & Violin, Vol. 3—Malcolm Bilson, fortepiano; Sergiu Luca, violin (Counts as 2—*Digital*—Nonesuch)

346320-396325. Mozart: Music For Basset Horns—members Chicago Symph. Winds (Counts as 2—*Digital*—CBS Masterworks)

341974. Mozart: Music For Wind Quintet—played by Ensemble Wien-Berlin *(Digital*—CBS Masterworks)

321224. Mozart: Overtures—Don Giovanni, Cosi fan tutte; etc. Marriner, Acad. St. Martin *(Digital*—Angel)

340596. Mozart: Sonata, K. 448; Schubert: Fantasia Radu Lupu, Murray Perahia—ideal piano duo team! *(Digital*—CBS Masterworks)

349720-399725. Mozart: Complete Piano Concertos, Vol. 1 (Nos. 1-6 & 8)—Murray Perahia & English Chamber Orch.(Counts as 2—CBS Masterworks)

RACHMANINOFF

334540. Rachmaninoff: Piano Concerto No. 2; Rhapsody On A Theme Of Paganini—Cecile Licad; Abbado, Chicago Symph. *(Digital*—CBS Masterworks)

334565. Rachmaninoff: Symphony No. 2 (complete version)—Simon Rattle and Los Angeles Philharmonic *(Digital*—Angel)

BAROQUE

319525-399527. Handel: The Messiah—Malgorie conducts soloists, choir & La Grande Ecurie (Counts as 2—CBS Masterworks)

346015. Handel: Royal Fireworks Music; other works—Malgorie, La Grande Ecurie & la Chambre duRoy *(Digital*—CBS Masterworks)

329615. Handel: Water Music. Malgorie, cond. *(Digital*—CBS Masterworks)

345975. Monteverdi: 18 Madrigals (from the Second Madrigal Book)—Collegium Vocale Koln; Fromme, dir. *(Digital*—CBS Masterworks)

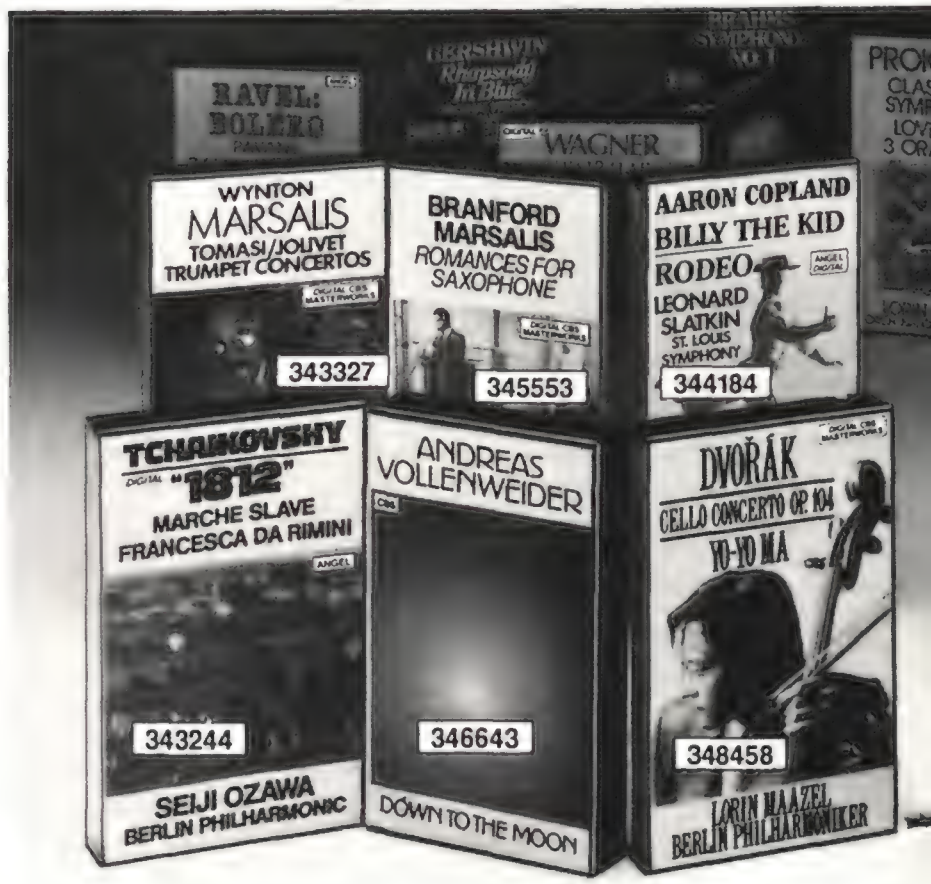
340190. Reich: The Desert Music—M.T. Thomas, cond. *(Digital*—Nonesuch)

329524. Sousa: Peaches & Cream—Marches, Dances—Kunzel, Cincinnati Pops *(Digital*—Vox Cum Laude)

338814. Webber: Requiem—with Domingo, Brightman, Maazel, English Chamber Orch. *(Digital*—Angel)

ROMANTICS

349654-399659. Berlioz: Romeo Et Juliette—Jessye Norman, Simon Estes, etc.; Muti and Philadelphia Orch. (Counts as 2—*Digital*—Angel)



SCHUBERT

343707. Schubert: The Impromptus, Op. 90 & 142—Murray Perahia is the pianist in these lovely works *(Digital*—CBS Masterworks)

343533. Schubert: Quartet No. 14 (Death & The Maiden) **& 13** (Rosamunde)—The Alban Berg Quartet *(Digital*—Angel)

341677. Schubert: Symphonies 2 & 8 (Unfinished)—Daniel Barenboim and the Berlin Philharmonic *(Digital*—CBS Masterworks)

344549. Schubert: Symphonies 3 & 5—Daniel Barenboim, Berlin Phil. *(Digital*—CBS Masterworks)

345959. Schubert: "Wanderer" Fantasie; Schumann: Fantasie—Murray Perahia in two lyrical performances *(Digital*—CBS Masterworks)

TCHAIKOVSKY

329169. Tchaikovsky: Symphony No. 4—Lorin Maazel, Cleveland Orch. (CBS Masterworks)

343350. Tchaikovsky: Symphony No. 5; Voyevode—Claudio Abbado and the Chicago Symphony *(Digital*—CBS Masterworks)

304352-394353. Tchaikovsky: The Nutcracker (complete)—Andrew Davis and Toronto Symphony in this ever-popular ballet (Counts as 2—Columbia)

334680. Tchaikovsky: Suites From "Swan Lake" and "Sleeping Beauty"—Riccardo Muti conducting the Philadelphia Orchestra *(Digital*—Angel)

336461. Tchaikovsky: Violin Concerto; Serenade—Pinchas Zukerman; Zubin Mehta, Israel Philharmonic *(Digital*—CBS Masterworks)

348649. Pachelbel Canon & Other Delights—Andrew Davis, Toronto Chamber Orch. *(Digital*—Fanfare)

343715. Vivaldi: Four Seasons—Lorin Maazel, soloists French Nat'l Orch. *(Digital*—CBS Masterworks)

332544. Vivaldi: 6 Flute Concertos (Op. 10). Rampal; Scimone and I Solisti Veneti *(Digital*—CBS Masterworks)

MODERN

345504. Berg: Violin Concerto (To The Memory Of An Angel); **3 Orchestral Pieces**—Zukerman; Boulez, BBC *(Digital*—CBS Masterworks)

349688. Bernstein: Fancy Free & Facsimile (complete ballets); **Candide Overture;** others—Slatkin, St. Louis Symphony *(Digital*—Angel)

263293. Bolling: Suite For Flute & Jazz Piano—Jean-Pierre Rampal and Claude Bolling (CBS Masterworks)

347567. George Gershwin's Song Book and other music for solo piano—Leonard Pennario *(Digital*—Angel)

340182. Glass, Philip: Mishima—music for the film *(Digital*—Nonesuch)

339226. Gershwin: Rhapsody In Blue; Second Rhapsody; etc.—M. Tilson Thomas, Los Angeles Phil. *(Digital*—CBS Masterworks)

330886. Grofe: Grand Canyon Suite; Mississippi Suite—E. Batiz, Royal Philharmonic *(Digital*—Angel)

341297. Prokofiev: Symphony No. 1 (Classical); **Love For Three Oranges Suite**—Lorin Maazel, cond. *(Digital*—CBS Masterworks)

324822. Ravel: Bolero; Rapsodie Espagnole; La Valse; etc. Maazel cond. *(Digital*—CBS Masterworks)

335547. Berlioz: Symphonie Fantastique—Barenboim cond. Berlin Philharmonic *(Digital*—CBS Masterworks)

331595. Bizet: Carmen Suite; L'Arlesienne Suites 1, 2—Seiji Ozawa, Orchestre National de France *(Digital*—Angel)

342386. Dvorak: Slavonic Dances, Op. 46—Andrew Davis, Philharmonia Orch. *(Digital*—CBS Masterworks)

346007. Dvorak: String Sextet, Op. 48; Smetana: Piano Trio, Op. 15—lyrical performances by Boston Symph. Chamber Players *(Digital*—Nonesuch)

333575. Elgar: Enigma Variations; Pomp And Circumstances Marches—Andrew Davis conducts the Philharmonia Orchestra *(Digital*—CBS Masterworks)

348425. Franck: Symphony In D Minor; Symphonic Variations—Weissenberg, piano; von Karajan, Berlin Phil. (Angel Master Series)

336990. Grieg: Peer Gynt (Incidental Music)—Lucia Popp; Marriner, Academy St. Martin *(Digital*—Angel)

345942. Grieg: Piano Concerto; Mendelssohn: Concerto No. 1—Ousset; Marriner, London Symphony *(Digital*—Angel)

343491. Lalo: Symphonie Espagnole; Sarasate: Zigeunerweisen—Anne-Sophie Mutter; S. Ozawa cond. *(Digital*—Angel)

321190. Liszt: Hungarian Rhapsodies 1 & 4; etc.—Boskovsky cond. (Angel)

331322. Saint-Saens: Carnival of the Animals; Prokofiev: Peter and the Wolf—I. Perlman, violin; K. & M. Labeque, pianists; Z. Mehta *(Digital*—Angel)

343467. Sibelius: Symphony No. 1; Oceanides —Simon Rattle, Birmingham Symphony (*Digital*—Angel)

334771. Sibelius: Symphonies No. 4 and **7**—Berglund, Helsinki Philharmonic (*Digital*—Angel)

225888. Smetana: The Moldau, "Bartered Bride" (excerpts); etc. Bernstein, New York Philharmonic (Columbia)

344127. Strauss, Richard: Don Quixote; Schoenberg: Concerto D Major—Yo-Yo Ma; Ozawa, Boston Symph. (*Digital*—CBS Masterworks)

VIRTUOSO!

328013. Nancy Allen—harp music by Debussy, Ravel (*Digital*—Angel)

334524. Salvatore Accardo Plays Paganini, Vol. 1—this great violinist plays *Moto perpetuo, Larghetto,* others. (*Digital*—Angel)

325886. Liona Boyd Live In Tokyo. Popular guitarist plays music by Ponce, Soler, Dowland, DeFalla (*Digital*—CBS Masterworks)

348441. Liona Boyd—Persona. Liona's debut pop album features *Labyrinth* (with Eric Clapton) (CBS)

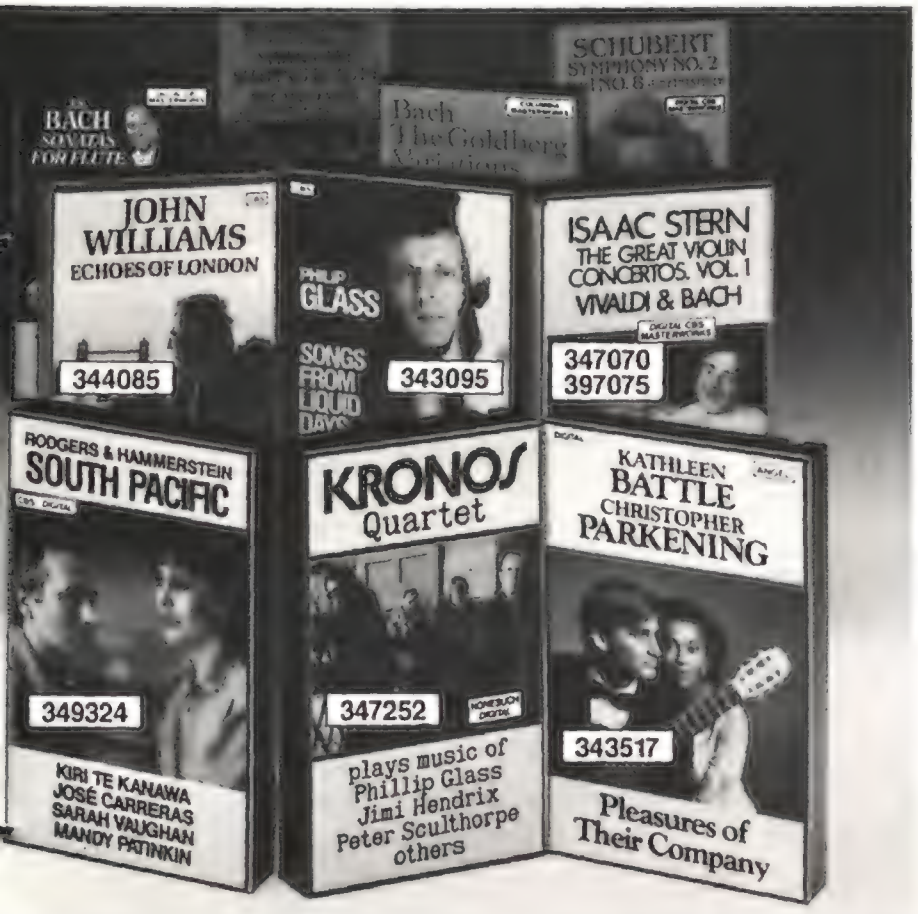
330159. Bob James—Rameau. The jazz artist on synthesizers. Superb! (*Digital*—CBS Masterworks)

350561. Ofra Harnoy & Orford String Quartet Play The Beatles. *Yesterday,* etc. (*Digital*—Fanfare)

350553. The Best Of Ofra Harnoy. Popular Canadian cellist—Summertime, The Swan, etc. (*Digital*—Fanfare)

246843. Vladimir Horowitz—New Recordings Of Chopin. (Columbia)

331314. Katia & Marielle Labeque Play Gershwin. (*Digital*—Angel)



340257. Liszt: Piano Concertos Nos. 1 & 2—Bolet; Zinman, Rochester Phil. (Vox Cum Laude)

310870-390872. Johann Strauss' Greatest Waltzes —*Blue Danube,* others. (Counts as 2—Columbia)

310086. Wagner: Overtures —*Flying Dutchman, Rienzi,* etc. Maazel, Philharmonia Orch. (CBS Masterworks)

334276. Canadian Brass & Berlin Phil. Brass—Brass In Berlin—Bach, etc. (*Digital*—CBS Masterworks)

345520. Empire Brass—A Bach Festival. D. Major, organ (*Digital*—Angel)

349282-399287. Glenn Gould Legacy, Vol. 2—piano music by Beethoven, Haydn, Mozart (Counts as 2—CBS Masterworks)

339408. Hubert Laws/Chick Corea/Quincy Jones. Blanchard New Earth Sonata; etc. (CBS Masterworks)

329607. Wynton Marsalis—Purcell, Handel, Torelli, etc. Edita Gruberova, soprano (*Digital*—CBS Masterworks)

343624. Wynton Marsalis Plays Trumpet Concertos. Haydn, Hummel, L. Mozart. (*Digital*—CBS Masterworks)

344564. Cecile Ousset Plays French Piano Music. Debussy, Ravel, Saint-Saens, Chabrier (*Digital*—Angel)

338178. Christopher Parkening—A Bach Celebration. Arrangements for solo guitar and chamber orchestra (*Digital*—Angel)

280610. Jean-Pierre Rampal—Greatest Hits. Handel's *Largo;* others (CBS Masterworks)

344135. Jean-Pierre Rampal—A Night At The Opera. Music by Massenet, Gluck, Mozart, etc. Placido Domingo sings & conducts (*Digital*—CBS Masterworks)

344515. Noel Rawsthorne—Organ Spectacular! Music by Sousa, Handel, Elgar, etc. (*Digital*—Angel)

347351. Rudolf Serkin Plays Reger (Variations & Fugue On A Theme By Bach) **and Haydn** (Sonata No. 50) (*Digital*—CBS Masterworks)

343673. Andre Watts—Live In Tokyo. Music by Brahms, Scarlatti, Haydn, Ravel, etc. (*Digital*—CBS Masterworks)

334763. John Williams—Bach, Handel, Marcello Concertos *arr. for guitar* (*Digital*—CBS Masterworks)

VOCAL AND ORCHESTRAL COLLECTIONS

331942. The Academy—By Request. Marriner and Academy of St. Martin. Bach, etc. (*Digital*—Angel)

328146. Willi Boskovsky cond. Symphonic Waltzes by R. Strauss, Tchaikovsky, Weber, etc. (*Digital*—Angel)

346353. Maria Callas Sings Verdi. Arias from Don Carlo, Otello, etc. (Angel Voices)

345934. Jose Carreras—Opera Arias. *Don Carlos, Pagliacci, Turandot, Aida, La Perichole,* etc. (Angel)

341602. Jose Carreras—French Opera Arias. Arias from Le Cid, Faust, Carmen, etc. (*Digital*—Angel)

292003-392001. Curtain Raisers—The World's Favorite Overtures. Szell, Bernstein, Ormandy, etc. (Counts as 2—Columbia)

337279. Placido Domingo—Save Your Nights For Me. *Love Came For Me; Maria;* etc. (CBS)

326553. Placido Domingo—Great Love Scenes. Ileana Cotrubas, Renata Scotto, Kiri Te Kanawa (CBS Masterworks)

347344. Benny Goodman—Collector's Edition. Includes Copland's *Clarinet Concerto;* also music by Bartok, Stravinsky, others (CBS Masterworks)

345462-395467. Gilbert & Sullivan—The Pirates of Penzance. Glyndebourne Festival Chorus and the Pro-Arte Orchestra (Counts as 2—Angel Voices)

344556. Greatest Hits Of The 1900's. Barber *Adagio;* Faure *Pavane;* others. Kapp. Philarmonia Virtuosi (*Digital*—CBS Masterworks)

346361. Edita Gruberova—Debussy, Mozart, Wolf (*Digital*—CBS Masterworks)

326389. Peter Hofmann Sings Wagner. Arias from Tannhauser, Lohengrin, etc. (*Digital*—CBS Masterworks)

347559. Von Karajan In Paris. Music by Chabrier, Gounod, Bizet (Angel)

332494. Erich Kunzel—International Salute. Music by Gould, Sibelius, etc. Cincinnati Pops Orch. (*Digital*—Vox Cum Laude)

349662. Eva Marton Sings Puccini Arias. Tosca, etc. Patane, Munich Radio Orch. (*Digital*—CBS Masterworks)

331959-391953. Mormon Tabernacle Choir—Great Choruses of Bach and Handel. (Counts as 2—CBS Masterworks)

346346. Jessye Norman—Lieder Recital. Songs by Schubert, Poulenc, Wagner (Angel Master Series)

337444. Eugene Ormandy—In Memoriam. Barber's *Adagio for Strings;* etc. (*Digital*—Angel)

334730. Lucia Popp Sings Schubert Lieder. *Gretchen Am Spinnrade; Die Forelle;* others (*Digital*—Angel)

339242. Puccini Heroines. Eva Marton, Renata Scotto, etc. (CBS Masterworks)

335455. Portrait of Frederica Von Stade. Rossini, Mozart, Brahms, etc. (CBS Masterworks)

346379. Frederica Von Stade—Songs Of The Auvergne, Vol. 2. Also Canteloube's *Triptyque.* (*Digital*—CBS Masterworks)

349670. Teresa Stratas Sings Kurt Weill. Schwartz and Y Chamber Symphony (*Digital*—Nonesuch)

340562. Waverly Consort—Renaissance Favorites. Gibbons, Morley, Des Prez (*Digital*—CBS Masterworks)

ANY 12 TAPES OR RECORDS FOR $1.00

plus shipping/handling
if you join the Club now and agree to buy 8 more selections (at regular Club prices) during the coming 3 years

Here's a wonderful opportunity to get a great classical collection of your own choice—all at once—all for only a dollar! As a new member of the Club's Classical Division, you may have any 12 of the tape cassettes *or* stereo records offered here—all 12 for only $1.00, plus shipping and handling. And in exchange, you simply agree to buy just 8 more selections in the next three years, at regular Club prices (which currently are $7.98 to $11.98, plus shipping and handling; some multi-unit sets and special recordings may be somewhat higher).

How the Club works: every four weeks (13 times a year) you'll receive our Music Magazine. It describes the "Classical Selection of the Month" *plus* scores of classical releases, as well as selections from other fields of music. In addition, up to six times a year you may receive offers of Special Selections, usually at a discount off regular Club prices, for a total of up to 19 buying opportunities.

CDs also available to Club members. Each issue of the Music Magazine contains a wide selection of Compact Discs—which you may order and these purchases also count toward fulfillment of your membership obligation.

There is no obligation to accept the "Selection of the Month"—you order *only* the recordings you want *when you want them!* A special response card will be enclosed with each Magazine—mail it by the date specified to order *or* reject any selection. And if you want *only* the "Selection of the Month," do nothing—it will be shipped automatically. You'll have at least ten days in which to make your decision—if you ever have less time than that, just return the Selection at our expense. And you may cancel membership anytime after buying 8 selections, or continue under our "buy one—get one free" money-saving bonus plan.

10-Day Free Trial: we'll send details of the Club's operation with your introductory shipment. If you are not satisfied for any reason, return everything within 10 days—your membership will be canceled and you will owe nothing.

Special Start-Your-Membership-Now Offer: you may *also* choose your first selection now—and we'll send it to you for at least 60% off regular Club prices (only $2.99). This discount purchase reduces your membership obligation immediately—you then need buy just 7 more (instead of 8) in 3 years. Just check box in application and fill in the number of your first selection.

NOTE: selections with two numbers are 2-record sets or double-length tapes. Each of these "double selections" counts as 2—so write in both numbers.

Columbia House
A Division of CBS Inc
1400 North Fruitridge Avenue
Terre Haute, Indiana 47811

© 1987 Columbia House

SEND NO MONEY—JUST MAIL COUPON TO GET YOUR CLASSICAL COLLECTION.

Columbia Record & Tape Club, 1400 N. Fruitridge
CLASSICAL DIVISION, Terre Haute, IN 47811

Please accept my membership application under the terms outlined in this advertisement. Send me the 12 classical selections listed here for only $1.00, plus shipping and handling. I agree to buy eight more selections (at regular Club prices) in the coming three years—and may cancel membership at any time after doing so.

Send my selections in this type of recording (check one):
☐ TAPE CASSETTES ☐ STEREO RECORDS

☐ Mr.
☐ Mrs. _____
☐ Miss *Print First Name* *Initial* *Last Name*

Address _____ Apt. _____

City _____

State _____ Zip _____

Do you have a VCR? (check one) ☐ Yes ☐ No 191/S87
Do you have a credit card? (check one) ☐ Yes ☐ No

This offer is not available in APO, FPO, Alaska, Hawaii, Puerto Rico, please write for details of alternative offer.

☐ Also send my first selection for at least a 60% discount for which I will be billed an additional $2.99. I then need buy only 7 more (instead of 8) at regular Club prices, in the coming 3 years.

SEND ME THESE 12 SELECTIONS

☐ CLASSICAL

AZ2/FA AZ3/FB

We reserve the right to request additional information or reject any application.

Secretary Adams' comments

Smithsonian horizons

The contemporary crafts movement has come of age, and at the Renwick Gallery its prospects have never been brighter

We have lately been giving much thought to the role of the crafts in the Smithsonian's great complex of museums. Over the years a number of shows at the Renwick Gallery have dealt with themes relating to the crafts. Falling under the same general rubric are numerous objects in our other, much larger collections relating to history, design and the arts. But except for the Renwick, our involvement with the crafts has been quite limited and somewhat inattentive. Meanwhile, interest and activity in the contemporary crafts have become more articulate and recognizable than they have ever been before.

Important manifestations of this interest right at home are the competitive craft shows held every April by the Smithsonian Women's Committee. With each year's success, there is a growing recognition that the public participation they have encouraged is helping to set new standards of technical mastery and creative design. Heterogeneous, widely separated, but increasingly self-confident clusterings of designers and their supporters have begun to take on the shape and coherence of a truly significant cultural movement. The opening of the American Craft Museum in New York last October may well be taken as a signal of its formal coming of age.

What is it that distinguishes this movement from the arts, in one direction, and from the commercially inspired fads of popular culture in the other? Even if unambiguous boundaries cannot be drawn around the crafts, can we identify a distinctive central thrust that provides them with at least a degree of unity? Although convincing and unequivocal answers to these questions have not been easy to come by, there yet remains the reality of a thriving, changing field of unquestionably growing achievement. It must be acknowledged and dealt with.

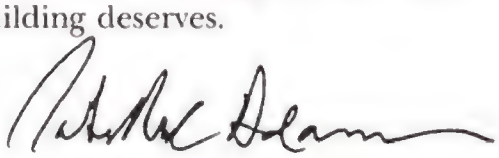
Functionality is sometimes suggested as an essential feature of the crafts, and until recently it did indeed serve fairly well as a diagnostic criterion. Today, however, it is viewed in some craft circles as a limitation that restricts creative possibilities. This invites suspicion of a consciously pursued upward mobility, a turning away from humble origins in search of a place on an elevated, timeless and universal pedestal. Surely there is some risk that "good taste" will become a synonym for mere esthetic prejudice if design is cut adrift from its functional and cultural moorings. But risk notwithstanding, the dissolution of any line separating art and craft is what many in the movement hope for.

The association of crafts with craftsmanship takes us a step farther. Modern crafts are labor-intensive and cannot compete with mass-produced products. They naturally stand for heightened attention to the properties and quality of materials, and for care in execution that gives to each object a sense of individualized esthetic fulfillment. But while the intrinsic beauty of finely wrought materials plays a powerful part in the vogue of the crafts, a central tenet of modernism in art has been a denial of the intrinsic significance of any medium and the willingness to incorporate the most mundane materials. "From its earliest inception," as Neal Benzera writes (*New York Times*, October 19, 1986), "modernism valued imagination over dexterity, and took a very dim view of craftsmanship for its own sake."

So the lines to be drawn, if any, are not absolutes but products of our times. We are entitled to worry whether enshrining crafts in museums may not turn them into objects for rootless, functionless, contextless contemplation. But we are also entitled to hope that proper recognition in and by museums will reduce the relative isolation of crafts and craftsmen from the intellectual currents that have transformed both the arts and the society at large.

Weighing these considerations carefully, Tom L. Freudenheim, the Smithsonian's Assistant Secretary for Museums, has come to the conclusion that henceforth we need to devote the Renwick Gallery exclusively to American crafts. His decision coincides with the recommendation of a committee that was convened to consider directions to be taken following the retirement of Lloyd Herman, the Gallery's first director. Taking the "broadest possible view," he adds, we will include "important historical developments as well as contemporary work" and "crafts in the context of other art." A new emphasis on research and publication is anticipated.

Put the Renwick on your agenda for your next trip to Washington. Recently and painstakingly restored, it has always been an architectural gem. Now its collections and exhibits will take on the consistency of growth and coverage that this modest (for Washington!) but exquisite building deserves.



COLORTRAK

INTRODUCING THE 27-INCH COLORTRAK 2000. IT DOESN'T CUT CORNERS. IT DOESN'T BEND THE TRUTH.

If you settle for less than RCA's new ColorTrak 2000, that's exactly what you'll get. Less picture. Less performance. Less excitement.

Why? Well for starters, each new ColorTrak 2000 is a fully-featured, high-performance video monitor with a built-in stereo receiver. But the biggest reason is RCA's revolutionary new picture tube: The Vista Screen tube.

Unlike conventional round-cornered tubes which cut the corners off their picture, RCA's Vista Screen is perfectly square. So instead of cutting corners, the new ColorTrak 2000 delivers more picture, a walloping 27 inches of picture (measured diagonally).

Not only is the picture bigger than ever, it's truer than ever. Because in addition to being perfectly square, our Vista Screen tube happens to be the flattest 27-inch tube ever produced. In fact, it's so much flatter that it virtually eliminates picture distortion. So all you'll see on its big 27-inch screen is the truth, the whole truth, and nothing but the truth.

Now before you settle for anything less, why not judge the new ColorTrak 2000 for yourself? Just ask your local RCA dealer to show you the best color television that RCA—and possibly anyone else—has ever made.

RCA

TECHNOLOGY THAT EXCITES THE SENSES.

TWO THOUSAND

Letters to the Editor

Art and the Machine Age

Dear Sir: As to your November article, streamlining had been accomplished by painters, sculptors and architects long before it appeared in the machine.

One can see in Henri Rousseau's *Sleeping Gypsy* of 1897 and Edvard Munch's famous *Dance of Life* (1899-1900) the svelte contours and elongation characteristic of streamlining. In turn-of-the-century architecture these features appeared in Frank Lloyd Wright's work.

They occur in Brancusi's *Sleeping Muse* of 1909 and carry on to his 1925 *Bird in Space*. Then, Giorgio de Chirico, Modigliani, Jean Arp and the Russian Constructivists were all early contributors to a tendency to streamline.

Coco Chanel's elongated, unbroken line was a fashion trendsetter in the 1920s and may be counted among the earliest applications to commercial design of streamlining principles.

Irma B. Jaffe
Professor of Art History
Fordham University
The Bronx, New York

Martin and Osa Johnson

Dear Sir: Having grown up in the 1930s, I remember spending many happy Saturday afternoons at the neighborhood movie theaters, watching with fascination films of the Johnsons' adventures in far corners of the world. During those troubled times they provided not only an escape from day-to-day problems, but also the thrill of vicarious adventure in the imagination of a young boy.

Martin and Osa Johnson were not my only heroes. Lowell Thomas and Richard Halliburton also offered opportunities to see the world and experience adventure in the dark corners of little-known islands and continents.

Charles J. Miller
Lakewood, Ohio

Diner decline

Dear Sir: Here in Cherry Hill, diners don't just abound, they are always crowded. Our way of life includes Olga's—the matriarch of local diners—and several others. All serve a wide variety of dishes, palatable and generous—many, at any time of the day, seven days a week, all year round including Christmas.

Let's hope that diners will last forever. After a week of business suits and cravats, I am in no mood to dress up for dinner, especially on Friday nights.

George F. Muscat
Cherry Hill, New Jersey

Dear Sir: In my salad days, diners were called "bean wagons," and after a dance one took one's girl there for scrambled eggs and coffee at about 3 in the morning.

H. L. Bishop
Forest Hills, New York

STEAMBOATIN'℠ THE ORIGINAL AMERICAN VACATION.

Over a century ago, more than 11,000 paddlewheelers plied the Mississippi and Ohio rivers. It was an era of discovery. An era of grandeur. The Steamboatin' Era.

Today, that grand tradition lives on board the legendary Delta Queen and the magnificent Mississippi Queen. The two grand ladies of the river offer you the time of your life, deluxe quarters, gourmet dining, and a relaxing, entertaining vacation. These two majestic paddlewheelers gently glide you back in time past historic riverboat towns, plantations and battlefields. To the very heart of America.

When you hear the whistle blow, and the calliope playing, it's your turn to rediscover America—Steamboatin' style. For a free color brochure, call your travel agent or mail in the coupon.

FREE BROCHURE
See your travel agent or call toll-free 1-800-543-1949
or write: The Delta Queen Steamboat Co.
Dept. 1SM7 #30 Robin St. Wharf • New Orleans, LA 70130

Name_____
Address_____
City_____ State_____ Zip_____
Telephone (area code_____) _____

DELTA QUEEN®
STEAMBOAT
DELTA QUEEN
MISSISSIPPI QUEEN

Q. Would you buy a pair of shoes from this man?

A. Thousands of Lands' End customers do, for reasons this interview makes clear.

Above is a rare photo of Jim Jennings, the "old shoe dog" who governs the buying and selling of Lands' End shoes. Rare, because Jim is seldom caught in repose. But Carol Sadtler, one of our resourceful creative people, cornered him one day, and what follows are excerpts from an interview that may lead you to rethink whatever prejudice you may have against ordering shoes from a catalog. Even ours.

Carol: *How long have you been in the business, Jim? And how does that affect your buying shoes for your customers?*

Jim: Let's see... about 20 years, I guess. When you've been around that long, you see a lot of companies come and go. You get to know the good, reliable ones. The ones that make the Lands' End kind of shoe.

Carol: *And what kind of shoe is that?*

Jim: The kind of shoe that goes with the clothing we sell. Not "high fashion", or a "hot seller". But classic. We offer casual shoes, as you know, and a very controlled line of dress shoes. Always in style. And as well made as possible.

Carol: *What steps do you take to get that kind of quality?*

Jim: Extra steps, frankly. When we look at a shoe, we'll see what we can add to it to give it more quality. Like a leather lining instead of vinyl, so the shoe wears longer and breathes better. Or a wool lining instead of acrylic in a pair of slippers. Or we'll add a better sole.

(JIM PAUSES, RUMMAGING AROUND IN SOME SHOE BOXES AND COMES UP WITH A PAIR OF LANDS' END "DUSTY BUCKS".)

Here's a perfect example. We took these traditional Bucks. Nice suede leather, but the rubber soles wore out in a big hurry. And they were heavy. So we added a lightweight Vibram® sole, with a real tough skin to make it long-lasting. Now, instead of a Buck, we give you a Buck-and-a-quarter.

Carol: *They warned me about your puns, Jim. Let's get serious again. I'm told you visit manufacturers quite often. Right? What do you look for?*

Jim: Actually, as a company we probably do make more factory visits than most. That's really the only way to maintain quality. You just can't run our business from an "ivory tower". And when we do visit, we look to see how things are organized. And at how many points the shoes are inspected. After a while, you can tell how neat and careful the work is at every step.

Carol: *Do you literally look over a handsewer's shoulder?*

Jim: You bet. You look to see how neat and even the stitches are.

Carol: *That kind of quality control must take a lot of travel.*

Jim: It does. But we're fortunate in having built up a very strong domestic structure of suppliers. Which means for the customer that we can keep an eagle eye on quality, and keep the shoes they want in stock too.

LANDS' END
DIRECT MERCHANTS

Carol: *But you buy shoes overseas, too?*

Jim: Yes, indeed. We go where we can get the best shoe. Italy, for example, for the fine leathers and excellent craftsmanship for some of our dressier shoes.

Carol: *How do you do all these extra things and still keep prices as low as they are?*

Jim: We have several things going for us. We don't operate on the normal 50% retail mark-up. We're direct merchants, with no middlemen to raise costs. Also, we order in large quantities. And we have long-standing relationships with our suppliers, which helps.

Carol: *What would you say to the person who hesitates to order shoes from a catalog because of fit?*

Jim: We make an extra effort to standardize sizes within our offerings. We've used the same lasts—which determine fit—for ten years or more in many of our shoes. And we fit-test a shoe on 20 to 25 people before we offer it.

Carol: *Gee, you seem to have things all worked out. Don't you have any problems?*

(LONG PAUSE. JIM LAUGHS A LITTLE NERVOUSLY. FINALLY, HE ANSWERS.)

Jim: Frankly, the hardest thing to do is managing the variety of sizes and colors we offer in each style. We try our darndest to fit everybody, and that means we have to keep track of something like 1863 offerings.

Carol: *That ought to keep you busy. And your customers happy.*

Jim: Well, Carol... that's the idea!

* * * * *

It is, indeed. Whether it's Lands' End shoes you're buying, or any one of our other catalog items. All quality offerings, all priced to reflect remarkable value, all GUARANTEED. PERIOD.

Call our toll-free number for a free catalog. Or send in the coupon below. We'll tell Jim Jennings he can expect to hear from you. Okay?

Please send free catalog.
Lands' End Dept. B-71
Dodgeville, WI 53595

Name _____

Address _____

City _____

State _____ Zip _____

Or call Toll-free:
800-356-4444

Even a perfectionist needs a little variety now and then.

Tanqueray Gin.
A singular experience.

TANQUERAY® IMPORTED ENGLISH GIN. 100% GRAIN NEUTRAL SPIRITS. 94.6 PROOF. IMPORTED BY DISTILLERS SOMERSET, N.Y., N.Y. ©1984

Dear Sir: "Diner: An American Artform" will be on view at the Castle Gallery of the College of New Rochelle through January. Underwritten in part by Phil DeRaffele, whose family owns one of the largest diner manufacturers in the country, it features paintings, drawings and sculpture by artists inspired by the American diner.

Patrons of the exhibit will be able to share the fellowship of a 17½-foot Art Deco counter, on loan from the Great American Salvage Company of New Haven, Connecticut.

Susan Shoulet, Director
Castle Gallery
New Rochelle, New York

Dear Sir: Writing *Classic Diners of the Northeast*, Donald Kaplan and I visited over 200.

We found people returning in droves to the old-fashioned diner—a place where one can start an easy conversation with a stranger, field some really good wisecracks from the grill man (an expert in the area of insults) or share a story with a kindred soul.

Alan Bellink
New York City

Dear Sir: One diner was not a place of comity or camaraderie, but menace. In the first scene of Robert Siodmak's 1946 film of Hemingway's "The Killers," William Conrad and Charles MacGraw held the owner and staff of a diner at gunpoint, trying to locate Burt Lancaster, whom they had been hired to kill.

Terry Bigham
Bristol, Rhode Island

Henri Matisse

Dear Sir: I was surprised that Matisse painted left-handed, or appeared to do so in his *Self-portrait* on page 81. Perhaps he used either hand to paint?

W. M. Cain
Worthington, Indiana

Pierre Matisse, the artist's son, confirms that his father always painted right-handed. The self-portrait is a mirror image, wherein the right hand appears to be the left. Ed.

The Great Sparrow War

Dear Sir: Around the climax of the Great Sparrow War, my father was ordained to the ministry by a Presbyterian clergyman named Lindsay.

Following the ceremony, Mr. Lindsay regaled the assembled clergymen with a tale concerning his son, a lad of ten. Young Jim had been involved in a scrape that was reported to his father for appropriate action—a trip to the woodshed. After the action, Jim tearfully asked who had told on him. Not wishing to reveal the tattletale's identity, Mr. Lindsay answered, "A little bird." Whereupon Jim responded, "It must have been one of them damned sparrows."

Some 60 years later, my father came to live with us in Brockport, New York, and discovered that the owner of a combination secondhand store, antique mine and fire hazard was none other than Jim Lindsay. Father visited him and related the sparrow story, much to Jim's amusement and delight.

Among my father's favorite books is a volume of *Whittier's Early Poems*. The inscription: "To my old friend Louis Ruf from James B. Lindsay, one of them damned sparrows."

William A. Ruf
Andover, Massachusetts

Dear Sir: You relate that our Owosso, Michigan, city fathers purchased four sparrows in 1876. By 1915, when I was ten, there were thousands, such a nuisance the township had placed a two-cent bounty on English sparrow heads.

Just over the railroad tracks in West Owosso was a large granary and hay barn, besieged by sparrows. Armed with our BB guns, it was our hunting ground.

Mr. Faust, the township supervisor, paid the bounty at his farm on the edge of town. One of my pals happened to find out that he dumped the sparrow heads behind the barn. I am sure the unsuspecting Mr. Faust paid bounty on the same sparrow heads as many as three or four times, while certain parents boasted about the improved marksmanship of their young hunters.

Jim Lewis
Hessel, Michigan

Transcontinental trucking

Dear Sir: I was thoroughly enjoying Robert A. Hutchison's article until I read about a shipment of "Linotype presses." As a former Lino operator with 20 years' experience, I must say I never heard of such a thing. A Linotype is a wonderful, weird machine that makes a lead slug line-of-type, hence its name.

The press then prints the words set on the slug. If there's a combination job, I sure would like to run one.

Abie Crume
Hereford, Texas

Inventing that Linotype press was a mere flight of editorial fancy. Ed.

Sets of permanent value at surprising savings.

The Encyclopedia of Philosophy

for **$24.95** (Pub. price $225)

Regarded as the most comprehensive encyclopedia of philosophy ever published, this superb set—compiled in collaboration with the world's foremost philosophers—encompasses all aspects of ancient, medieval, modern, Eastern and Western thought. The four volumes represent an essential aid for students and a rewarding reference source for home libraries.

The Compact Edition of The Oxford English Dictionary

for **$27.95** (Pub. price $175)

"The most complete, most scholarly dictionary of the English language"—*The Christian Science Monitor.* Through photoreduction, the original 13-volume set has been reproduced in this two-volume *Compact Edition.* A Bausch & Lomb magnifying glass is included.

The Times Atlas of the World Seventh Comprehensive Edition

for **$29.95** (Pub. price $139.95)

"The best atlas now available in English"—*The New York Times.* With 122 double-paged, 8-color maps for clear reading of geographical and political features, this latest edition (1985) also contains a fully updated index-gazetteer with over 200,000 entries and many other unique features. Size: 18" x 12"; 520 pages.

The Story of Civilization by Will and Ariel Durant

for **$29.95** (Pub. prices total $335.45)

For almost half a century Will and Ariel Durant traced the continuity of world history—the religions and philosophies, the political and economic tides, the arts and sciences, the customs and conquests—to show the foundations of society today. A Book-of-the-Month Club exclusive for almost 50 years, the Durants' illustrated masterwork is history come alive.

The Second World War by Winston S. Churchill

for **$27.50** (Pub. price $295)

New Chartwell Edition of this six-volume Nobel Prize-winning masterwork, in genuine leather quarter-bindings, with a foreword by William L. Shirer. Churchill's Olympian wisdom, passion and wit—and his unique role as a wartime leader—make his account of World War II unforgettable reading. Frontispiece photographs, 3-color battle-map endpapers, 195 additional maps, charts and diagrams.

Choose one of these five sets and save up to $305.50

You simply agree to buy 4 additional books within the next two years.

© 1986 BOMC

Facts About Membership. As a member you will receive the *Book-of-the-Month Club News*® 15 times a year (about every 3½ weeks). Every issue reviews a Selection and more than 125 other books, which are carefully chosen by our editors. If you want the Selection, do nothing. It will be shipped to you automatically. If you want one or more other books—or no book at all—indicate your decision on the Reply Form and return it by the specified date. *Return Privilege:* If the *News* is delayed and you receive the Selection without having had 10 days to notify us, you may return if for credit at our expense. *Cancellations:* Membership may be discontinued, either by you or by the Club, at any time after you have bought 4 additional books. Join today. With savings and choices like these, Book-of-the-Month Club is where book lovers belong.

BOOK-OF-THE-MONTH CLUB®

Book-of-the-Month Club, Inc., P.O. Box 8803, Camp Hill, PA 17011-8803 **A454-1**

Check one box only.

- ☐ 917. Ency. of Philosophy **$24.95**
- ☐ 905. Compact OED **$27.95**
- ☐ 946. Times Atlas of the World **$29.95**
- ☐ 913. The Story of Civ. **$29.95**
- ☐ 959. The Second World War **$27.50**

Please enroll me as a member of Book-of-the-Month Club and send me the item I have checked at left, billing me for the appropriate amount, plus shipping and handling charges. I agree to buy four books during the next two years. A shipping and handling charge is added to each shipment.

Name_____ 7-64

(Please print plainly)

Address_____ Apt._____

City_____

State_____ Zip_____

Prices shown are U.S. prices. Outside the U.S. prices are generally higher.
All orders are subject to approval.

CRUISE THE HAWAII THE BIG SHIPS CAN'T.

Discover the real Hawaii aboard the new luxury-yacht catamaran *Executive Explorer*. Our 7-night cruise includes all the major islands plus hidden coves and islets. With only 49 passengers, our deluxe ship takes you to secret places for Hawaii's best snorkeling, swimming, sunning and exploring. For reservations or free brochure, see any travel agent, mail coupon or call toll-free 1-800-426-0600 (in Seattle 624-8551).

U.S. Registry

Send my Hawaii Cruises and Tours brochure.
1500 Metropolitan Park Bldg., Dept. NJO, Seattle, WA 98101

Name _____

Address _____

City _____ State _____ ZIP _____

EXPLORATION® CRUISE LINES
ONE OF THE ANHEUSER-BUSCH COMPANIES

The Classic Woman

The Appleseed's Collection Catalog for Spring 1987...classically tailored dresses, sportswear and accessories in casual to elegant styles. Select from Evan Picone, David Brooks, Maggie London and more. Sizes range from 4-18. For your **FREE** catalog, write: Appleseed's Collection, 50 Dodge St., Dept. C3, Beverly, MA 01915 or call toll-free: **1-800-225-0786.** Mass. residents: **1-800-892-0838.**

Appleseed's COLLECTION

Phenomena

Dear Sir: I'm no churchman, but I do think that, in Mr. Wiley's excellent report on the convention of conservation biologists, John B. Cobb of the Claremont School of Theology came to the very nub of the matter when he declared that "our supreme calling is to contribute to the richness of the cosmic experience. Hence, to diminish diversity and thereby richness is a crime against the Creator."

Given the character of the American public, this is a theme that should be hammered home in our country. It is far too important to let pass by in a column of small type. It ought to be at the masthead of all conservation magazines.
Charlton Ogburn
Beaufort, South Carolina

Around the Mall

Dear Sir: Mr. Park's comments about the Owl's Head Transportation Museum and his hunt for information on the Curtiss Condor were particularly interesting to me. As a young architectural engineer, fresh out of MIT in 1929, I did much of the structural design of the Condor. In those days, except for a difference in the factor of safety, airplane structures were not too different from bridge or building trusses. But much more exciting.
William Baumrucker
Marblehead, Massachusetts

A golden receiver

Dear Sir: How many of your readers play water polo with their goldens? It is fast, exciting and guaranteed to deliver a cardiovascular workout. Our problem was to get Brandy to put her tennis ball into the goal. She's a brilliant ball stealer, but cannot bring herself to surrender it. We solved the problem by avoidance: she plays goalie.
Langley Wood
Lynchburg, Virginia

Dear Sir: May I venture a little correction? *Bravo!* is the masculine form of an Italian adjective meaning "Fine!" Its ending must agree with the gender of its noun, whether explicit or understood. Thus the tenor gets the *Bravo!*; the soprano should hear *Brava!* And so should your lovely and talented diva, Pamela, after her extraordinary performance with the tennis ball. I'm sure she is too courteous to correct you, but if she knows a little Italian—certainly not beyond her powers—whatever must she be thinking?
Mrs. Daphne H. Mebane
Venice, Florida
Mr. Foote says it took him six years in Paris just to get used to Bravo!, *which he regards as a splendid and usefully unisex way of expressing explosive admiration. Despite your confidence, he doubts Pamela would understand* Brava! Ed.

Dear Sir: I am acquainted with the tennis-ball-chasing dog in question and am, in fact, the tennis-playing nut who supplies her and her dogolotrous household with the occasional sack of used tennis balls.

Here is a portrait of her surrounded by same.
Wayne K. Greenwell
Valley Cottage, New York

Picture credits

Cover Patricia Caulfield; 24 Dane Penland; 36, 37 George Shelley; 38 Patricia Caulfield; 38, 39 George Shelley; 40-42 Patricia Caulfield; 43 Michael Lustbadar/Photo Researchers; 44 Raymond A. Mendez/Animals Animals; 46, 47 George Shelley; 50 Pierre Boulat/Cosmos; 51 Dallas Museum of Art; 52 Wendy Reves; 53 Dallas Museum of Art, UPI/Bettmann Newsphotos; 54 Dallas Museum of Art; 54-56 Peter C. Poulides; 57-59 Dallas Museum of Art; 62 Layne Kennedy; 63 Minnesota Historical Society; 64 British Museum; 65 William H. Jackson/Colorado Historical Society, Minnesota Historical Society, Public Archives Canada; 66 Archives Nationales du Quebec, T.W. Ingersoll/Minnesota Historical Society; 67 Bibliothèque Nationale, Gouvernement du Quebec, Ministère des Affairs Culturelles; 68 Fritz Dressler; 69 Osamu Mizuno/Uni Photo; 72 Andreas Sterzing; 73 Franz Lanting; 74 Donald R. Perry, Herbert W. Hesselmann; 74, 75 Kees van der Berg; 76 Jochen Knobloch; 76, 77 Harry Gruyaert/Magnum; 77 Andreas Sterzing; 78 Frieder Blickle/Focus; 79 George Gerster; 82-85 James R. Chiles; 86-93 Mark S. Wexler; 96-102 Arthur Shilstone; 105 Flip Schulke; 106 Aldo Tutino; 107 Skip Brown; 108-10 Aldo Tutino; 112-125 John Huehnergarth; 136, 37 Mill Pond Press Inc.; 140 Larry Ross

Own the sword that crowned 25 Kings

Actual size of sword:
38½" from blade tip to pommel.

Created for mighty Charlemagne over a thousand years ago... used in crowning more than 25 monarchs, from Louis XIV to Napoleon... this glorious sword is today a national treasure of France.

And this magnificent replica, wrought with precision and artistry by the legendary swordsmiths of Toledo, Spain, captures both the power and the opulence of the sword as it exists in France today.

Lavishly decorated with pure 24 karat gold electroplate... set with rich blue lapis... etched with the heraldic emblems of France's greatest rulers... it comes to you in a solid oak wall display rack.

To discover the thrill of holding a thousand years of history in your hand, reply by January 31st.

COMMISSIONING AUTHORIZATION

THE SWORD OF CHARLEMAGNE

Please mail by January 31, 1987.

The Franklin Mint
Franklin Center, Pennsylvania 19091
Please enter my commission for the historic re-creation of *The Sword of Charlemagne*.

I need send no payment now. I will be billed for the issue price of $395.* in five equal monthly installments of $79.* each, beginning when my sword is ready to be sent to me. I will receive the 44¾" x 9¾" solid oak wall display at no additional charge.

**Plus my state sales tax.*

Signature _____
ALL COMMISSIONS ARE SUBJECT TO ACCEPTANCE

Mr.
Mrs.
Miss _____
PLEASE PRINT CLEARLY

Address _____

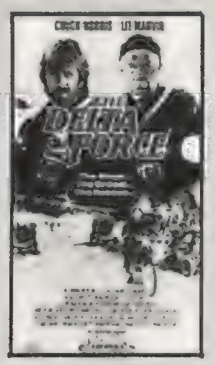
City _____

State, Zip _____

FOR VCR OWNERS WHO KNOW A TAKE ANY THREE MOVIES,

PICK FROM OVER 200 MOVIES ON THESE TWO PAGES.

SLEEPING BEAUTY
5437022



DELTA FORCE
3383012

ROCKY IV
3570042

JAGGED EDGE
1813052

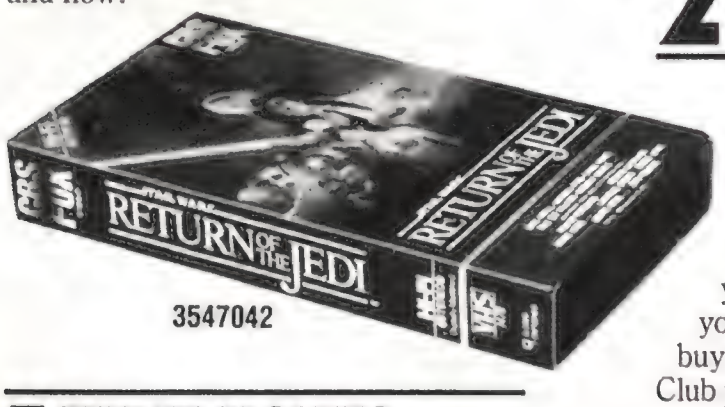
TITLE	SELECTION NUMBER
ROCKY	0563172
THE TEXAS CHAINSAW MASSACRE	3305062
THE HOWLING	0527202
THE BIG CHILL	1527022
RAGING BULL	0500132
PURPLE RAIN	6048012
THE CARE BEARS MOVIE	7110022
TRUE GRIT	2028122
SUPERMAN	0013132
CITY LIGHTS	0669022
OLD YELLER	5289012
A CHORUS LINE	3193012
THE PARENT TRAP	5286022
A SOLDIER'S STORY	1733282
JANE FONDA'S WORKOUT CHALLENGE	5260042
TO LIVE AND DIE IN L.A.	7225042
MARY POPPINS	5276062
PLACES IN THE HEART	0978082
EATING RAOUL	0793012
BODY DOUBLE	1713062
AGNES OF GOD	1812062
SESAME STREET PRESENTS: FOLLOW THAT BIRD	6117072
BUTCH CASSIDY AND THE SUNDANCE KID	0517302
CHARLOTTE'S WEB	2095022
FORT APACHE	5526042
THE GOOD, THE BAD AND THE UGLY	0582222
GUYS AND DOLLS	3533002
STARMAN	1723042
PALE RIDER	6097012
FRIDAY THE 13TH	2042062
FUNNY GIRL	1511002
TWICE IN A LIFETIME	4857062
REDS	2029032
THE BLACK STALLION	0504012
AGAINST ALL ODDS	1633032
TERMS OF ENDEARMENT	2014182
RED RIVER	7507032
MISTER ROBERTS	6095032
CHARIOTS OF FIRE	6014012
PRIZZI'S HONOR	4802022
THE EMPIRE STRIKES BACK	0910092
THE CARE BEARS MOVIE II	1862052
BLADE RUNNER	3104092
GUESS WHO'S COMING TO DINNER	1819092
ARTHUR	6024092
WARGAMES	0828002
GREMLINS	6082092
IT'S A WONDERFUL LIFE	3256052
DUMBO	5251052
EDDIE MURPHY—DELIRIOUS	2055182

PRETTY IN PINK
4224022

IRON EAGLE
3588042

TITLE	SELECTION NUMBER
THE BRIDGE ON THE RIVER KWAI	1606062
TO CATCH A THIEF	2050052
ENEMY MINE	3584082
MOONRAKER	0677102
JANE FONDA'S NEW WORKOUT	5112042
WUTHERING HEIGHTS	3126032
A VIEW TO A KILL	0989052
THE GREAT ESCAPE	0638002
DR. STRANGELOVE	1521082
A NIGHTMARE ON ELM STREET 2	3382022
CRUISING	3500252
THE GOLDEN VOYAGE OF SINBAD	1653082
SMOOTH TALK	4858052
ALL THE PRESIDENT'S MEN	6070022
SILVERADO	1810082
WEST SIDE STORY	0505342
DEATH WISH	2027132
THE COTTON CLUB	3100032
STING—BRING ON THE NIGHT	5116002
PORKY'S	0775112
LOVE STORY	2040082
POLICE ACADEMY	6049002
COCOON	3553052
THE NATURAL	1649052
ELENI	3196082
THE CLAN OF THE CAVE BEAR	3583092
FRIGHT NIGHT	1820062
ROMANCING THE STONE	0894092
FANTASTIC VOYAGE	0607152
STAR WARS	0564162
COMMANDO	3555032
BONNIE AND CLYDE	6072002
SOME LIKE IT HOT	0584122
RE-ANIMATOR	4847092
PATTON	0043092
RISKY BUSINESS	6033082
THE BEST OF TIMES	3208042
ALICE IN WONDERLAND	5423082
STAGECOACH	7113252
PINOCCHIO	5361102
CABARET	4001272
YENTL	0895082
ANNIE HALL	0502032
STALAG 17	4101002
THE GRADUATE	3103002
POWER	5119072
ST. ELMO'S FIRE	1803072
20,000 LEAGUES UNDER THE SEA	5378032
STAR TREK—THE MOTION PICTURE	2035132
CLOSE ENCOUNTERS OF THE THIRD KIND	1510192
MY FAIR LADY	3507022
BILL COSBY—HIMSELF	0935002
BODY HEAT	6020032
THE RIGHT STUFF	6043062
CHINATOWN	2025152
CLEOPATRA	0579012
REVOLUTION	6115092
OCTOPUSSY	0856212
GIANT	6080002
A NIGHTMARE ON ELM STREET	3288072
KRAMER VS. KRAMER	1503002
FIREFOX	6079032
THE GREATEST STORY EVER TOLD	0855062

A lot of savvy VCR owners have been finding out how good our deal is. And how good our movies are. Just keep reading and you'll see for yourself four reasons why the CBS Video Club has the best deal around on the movies you want to own. And you can get in on that deal right here and now.



3547042

1 THREE MOVIES ONLY $3.30 EACH.
WITH MEMBERSHIP

Seems too good to be true? Then take a good look at the listing above. We'll send you any three of over 200 terrific movies here for $3.30 each, just for joining the Club. We'll even pay the shipping and handling.

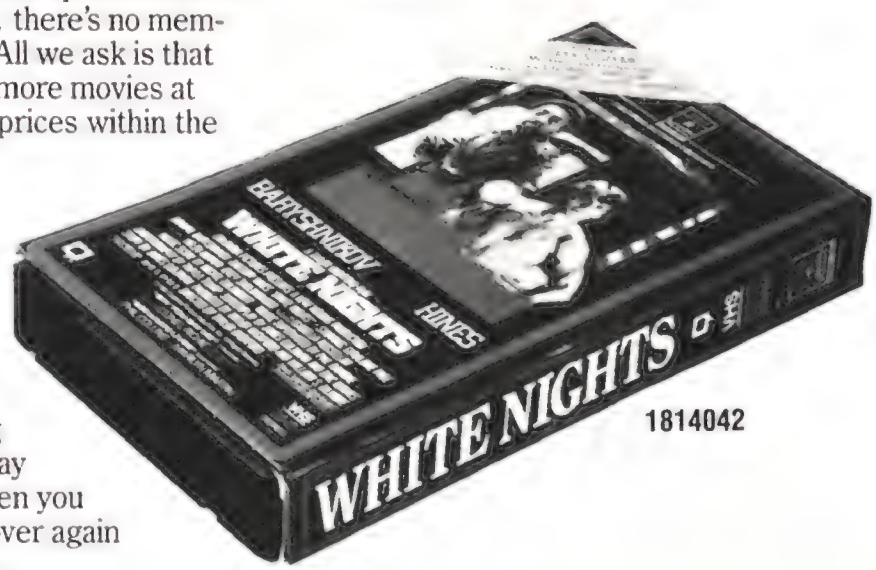
You can also order a fourth movie right now and save up to $60 more (see box at right). And that's only the beginning.

2 PAY NO MEMBERSHIP FEE.

Even with an upfront deal as good as ours, there's no membership fee. All we ask is that you buy five more movies at regular Club prices within the next two years—movies you'd probably buy anyway. Club prices currently range from $29.95 to $79.95, plus shipping and handling (extra-long films and specials may cost a bit more). Then you can start saving all over again with our Bonus Plan.

3 SAVE 50% WITH OUR BONUS PLAN.

Once you've bought five movies at regular Club prices, you can cancel your membership at any time. But most members prefer to keep buying from the Club. Because under our current generous Bonus Plan, each movie you buy allows you to take



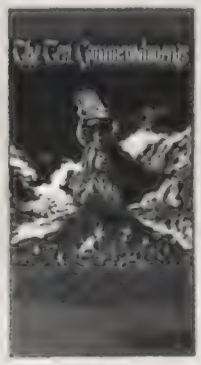
1814042

GOOD DEAL WHEN THEY SEE ONE. JUST $3.30 EACH.

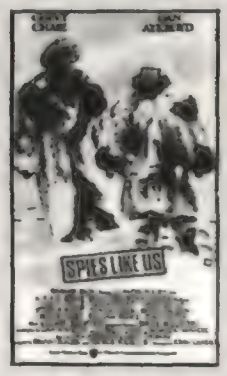
WITH MEMBERSHIP

PICK FROM OVER 200 MOVIES ON THESE TWO PAGES.

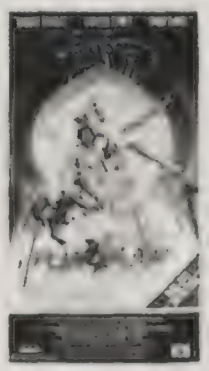
TITLE	SELECTION NUMBER	TITLE	SELECTION NUMBER
HALLOWEEN	3250012	THE THING (ORIGINAL)	5505092
STOP MAKING SENSE	1759192	ARSENIC AND OLD LACE	0735102
AIRPLANE	2033232	CAT BALLOU	1545002
TEEN WOLF	4104072	AMERICAN GIGOLO	2030002
STAR TREK III– THE SEARCH FOR SPOCK	2016162	THE SWORD IN THE STONE	5409062
		MAD MAX: BEYOND THUNDERDOME	6089012
NORTH TO ALASKA	7310002	ROBIN HOOD	5299092
THE SEVEN SAMURAI	3106052	GHOSTBUSTERS	1742012
THE KARATE KID	1710092	"10"	0011072
ALL ABOUT EVE	0044082	ALIEN	0002322
HELLO DOLLY	0699052	THE GODFATHER–PART II	0018002
FOOTLOOSE	2019052	SPLASH	5304022
THE RUSSIANS ARE COMING	0948052	WITNESS	4114052
YANKEE DOODLE DANDY	0574062	THE LONGEST DAY	0577032
RETURN OF THE DRAGON	0818022		



THE TEN COMMANDMENTS
2026062



SPIES LIKE US
6116082



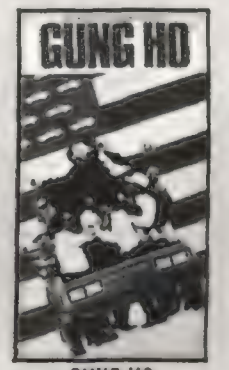
JEWEL OF THE NILE
3571032

DOWN AND OUT IN BEVERLY HILLS
5426052

MURPHY'S ROMANCE
1853062

AFTER HOURS
6167062

TITLE	SELECTION NUMBER	TITLE	SELECTION NUMBER	TITLE	SELECTION NUMBER
PRIVATE BENJAMIN	6018072	REBECCA	0994072	COUNTRY	5341072
DAS BOOT	1520092	OKLAHOMA!	0054052	THE MAN WHO SHOT LIBERTY VALANCE	2092052
THE POSTMAN ALWAYS RINGS TWICE	4000022	BLUE HAWAII	0973142		
		THE MUPPETS TAKE MANHATTAN	0923122	THE ROAD WARRIOR	6028052
ANNIE	1516052			RICHARD PRYOR–LIVE ON THE SUNSET STRIP	1603092
STRIPES	1513162	THE PINK PANTHER	0561012		
CARNAL KNOWLEDGE	3122072	SUNSET BOULEVARD	2003032	THE KILLING FIELDS	6084062
THE AFRICAN QUEEN	0511022			FROM RUSSIA WITH LOVE	0090212
GANDHI	1533042			TRADING PLACES	2017152
CASABLANCA	0507162			THE FRENCH CONNECTION	0042422
TOOTSIE	1509042			NATIONAL LAMPOON'S EUROPEAN VACATION	6096022
MAD MAX	7109052			REVENGE OF THE NERDS	0925022
THE DAY THE EARTH STOOD STILL	0576042			CITIZEN KANE	5501032
				LAWRENCE OF ARABIA	1514072
THE FALCON AND THE SNOWMAN	4808062			KING KONG (ORIGINAL)	5502022
				SATURDAY NIGHT FEVER	2020782
BEVERLY HILLS COP	2053102			GREASE	2074072
FLASHDANCE	2018142			LOST IN AMERICA	6088022
THE MAGNIFICENT SEVEN	0534212			THE MAN WHO WOULD BE KING	0559032
M*A*S*H	0055122			THE MALTESE FALCON	0561072
SUMMER RENTAL	4173032			THE ALAMO	0083052
FANNY AND ALEXANDER	3112092			MR. MOM	7104002
48 HOURS	2022182			SHE WORE A YELLOW RIBBON	5504002
THE BIG SLEEP	0559002			A PASSAGE TO INDIA	1741022
THE EMERALD FOREST	3145002			MOMMIE DEAREST	2090142
DIRTY HARRY	6017082				



GUNG HO
4225012

THE WAY WE WERE	1529002	WITNESS FOR THE PROSECUTION	0717122
PEE WEE'S BIG ADVENTURE	6098002	THE GODFATHER	0006022
KISS OF THE SPIDER WOMAN	3187092	AN AMERICAN WEREWOLF IN LONDON	7140062
ON GOLDEN POND	0523162	LA CAGE AUX FOLLES	0512012
GOONIES	6081092	CADDYSHACK	6023002
NOTORIOUS	0567132	SOUTH PACIFIC	3506112
NEVER SAY NEVER AGAIN	6042072	AN OFFICER AND A GENTLEMAN	2021192
THE WOMAN IN RED	7105092		

another movie of equal value or less at 50% off. And we'll see to it that you always have plenty to choose from.

4 HUNDREDS OF HIT MOVIES.

About every four weeks (up to 13 times a year), we'll send you our *CBS Video Club Magazine*, reviewing our Director's Selection plus a wide choice of alternate movies. Including recent hits like *Pretty in Pink* and *Return of the Jedi*. Classics like *Casablanca* and *The African Queen*. And family favorites like *The Sound of Music* and *Sleeping Beauty*.

In addition, up to three times a year, you may receive offers of special selections, usually at a discount off regular Club prices, for a total of up to 16 buying opportunities.

If you want the Director's Selection, don't do a thing. It will arrive automatically. If you prefer an alternate or none at all, just let us know by mailing the enclosed card by the date specified. (If you ever receive a tape before having had a full two weeks to decide, send it back at our expense.) You can also call us toll free with any questions or service requests.

Advance Selection

SAVE UP TO $60 MORE– HAVE LESS TO BUY LATER!

Order a fourth movie now for only $19.95 (that's up to $60 savings!)–and your membership obligation is immediately reduced (you then need buy only 4 more, instead of 5). See coupon at right.

Join today and we'll send your first three movies for just $3.30 each along with more details on how the Club works.

If you're not satisfied, return everything within 10 days for a full, prompt refund–no further obligation.

For faster service, use your credit card to order and call toll free **1-800-CBS-4804** (in Indiana, call 1-800-742-1200). Or mail the coupon.

CBS VIDEO CLUB
1400 North Fruitridge Avenue, Terre Haute, IN 47811

CBS VIDEO CLUB 1400 North Fruitridge Avenue
Dept. 609, P.O. Box 1111, Terre Haute, IN 47811

Please enroll me in the CBS Video Club under the terms outlined in this advertisement. As a member, I need to buy just five more movies at regular Club prices within the next two years.

SEND ME THESE 3 MOVIES FOR ONLY $3.30 EACH.
That's only $9.90 for all 3!

#
#
#

Check one: ☐ **VHS** ☐ **BETA**

Please check how paying:

☐ My check is enclosed. X19/X21

☐ Charge my introductory movies and future Club purchases to:

☐ MasterCard ☐ Diners Club
☐ American Express ☐ VISA X20/X22

Account #_____

Expiration Date_____

Signature_____

☐ **Also send my first selection for $19.95** plus $3.00 for shipping/handling, which I'm adding to payment above. I then need buy only 4 more (instead of 5) in two years.

#

Name_____

Address_____

City_____ State_____

Zip_____ Phone (____)_____

NOTE: CBS Video Club reserves the right to reject any application or cancel any membership. Offer limited to continental U.S. and Canada (excluding Alaska). Canadian residents will be serviced from Toronto (offer may vary). **Applicable sales tax added to all orders.**

Good Morning!

From the Sir Thomas Lipton Collection

Start your day with sunshine and flowers…and a cup of tea. Savor your special moments with this pastel 18-oz. fine china teapot and 8-oz. teacup, decorated with a pattern adapted from an antique tapestry in Avignon, France. And just for you, we are sending you an introductory sampler of 12 tea bags of our finest English Breakfast tea to make mornings extra special. Enjoy! **$26.00** plus $2.00 shipping.

For fastest service call toll-free **1-800-932-0488**
(In Virginia, 1-800-523-6141) 7 days a week, 24 hours a day. Credit card orders only.

Please send me ___ Breakfast Set(s) with 12 tea bags of English Breakfast at $26.00 each, plus $2.00 shipping and handling per set. (7044S)

☐ Check enclosed ☐ Amex ☐ Visa ☐ MC

Name

Credit Card #

Address

Exp. Date ___/___

City State/Zip

Signature (required)

Offer valid only in U.S.A. thru August 1987

Sir Thomas Lipton's
TRADING COMPANY

Mail Order Division • Lipton Plaza • Dept. PJ7G22 • 115 Brand Road • Salem, VA 24156

JOHN JAMES AUDUBON

— BIRDS OF AMERICA —

Audubon's six most celebrated engravings struck from the original copperplates and hand-colored. The only impressions taken since the first edition 150 years ago. Limited to 125 portfolios worldwide.

Wild Turkey Male, Wild Turkey Female and Young, Snowy Owl, Canada Goose, Mallard Duck, Great White Heron

For information, please apply to the publishers:

American Museum of Natural History
Audubon Portfolio, Room 40
Central Park West at 79th St.
New York, NY 10024
(212) 873-1498

Alecto Historical Editions
Audubon Portfolio, Suite 7
46 Kelso Place
London W8 5QG
01-937 6611

Around the Mall and beyond

The world's largest tick is about the size of a big acorn, but gray-brown and smooth like a pecan—except that it's got legs. If you're not turned off already, let me go on. The tick's body is engorged. That's why it's so big. The legs are just the normal tiny tick size, eight bitty appendages, sticking out maybe an eighth of an inch from the fat, round body (p. 24). Somehow they make the world's largest tick look so helpless that it becomes sort of appealing. It looks the way many of us feel after Thanksgiving dinner.

The world's largest tick (*Amblyomma varium*) is pickled in alcohol at the Smithsonian's Museum Support Center, the great storage and research complex in Suitland, Maryland, just outside the District of Columbia. The world's largest tick sits in a bottle stacked in a laboratory drawer. It's stone-cold dead, and it feels like a cold stone when you heft it, as I'm sure you'd want to do.

Wait—there's more. The World's Largest Tick, or WLT (surely it rates uppercase), got that way by latching onto a South American three-toed sloth and drinking its fill. Now it's part of the world's largest collection of ticks.

The WLT, and thousands and thousands of other ticks ranging down in size to the almost microscopic, came to the Institution from the late Dr. Harry Hoogstraal, an extraordinary scientist who, until his death last February, knew more about ticks than anyone else, ever. A reference library dealing with ticks and the diseases they carry accompanies the collection. Specimens and reference materials form the foundation of the Smithsonian's proposed new Hoogstraal Center for Tick Research, which, presuming the necessary $1.5 million is raised, will certainly be the biggest and

Lenox.

Tea at the Ritz

A Lenox tribute to American fashion—created under the guidance of our country's leading costume experts.

Individually crafted of fine handpainted porcelain.

Available only by reservation.

© Lenox, Inc. 1987

Shown smaller than actual size of 8¾".

It is 1902. The turn of the century has brought exciting new fashions to America. A young lady is on the way to meet her gentleman friend for tea. She is impeccably dressed for the occasion with a mouton-trimmed hat, collar, bodice and muff. Her "visiting dress" of ivory broadcloth, trimmed with silk appliqué, represents the height of fashion of the day.

Tea at the Ritz has been created by Lenox under the guidance of distinguished fashion authorities—Vera Maxwell, renowned fashion designer; Carrie Robbins, award-winning Broadway costume designer; Robert Riley, Fashion Institute of Technology; and Matthew Kiernan, Costume Society of America. This lovely figurine represents one of the most important eras in American fashion and is *historically accurate down to the finest detail.*

A Handcrafted Work of Art

Conceived and designed by the artists of Lenox and created exclusively under their direction by master craftsmen in Japan, each figurine is individually crafted of the finest bisque porcelain—capturing *extraordinary detail* from the furry texture of the muff to the curving *art nouveau* floral designs on the skirt, bodice, and long, flowing sleeves.

Skilled artisans paint each piece *by hand,* creating a delicately colored work of art of incomparable beauty. And each figurine is embellished on its base in *pure 24 karat gold* with the title and the world-famous Lenox® trademark...the symbol of unsurpassed quality and craftsmanship. Of course, *your satisfaction is completely guaranteed.*

Available Only Direct from Lenox

Tea at the Ritz is available only by reservation direct from Lenox and will not be sold through even the most prestigious dealers or galleries. The original issue price is $95, payable in convenient monthly installments of $19 with *no finance charge.* Each figurine is accompanied by a Certificate of Authenticity and literature on the history of American fashion.

Since each figurine is individually handcrafted, please allow 6 to 8 weeks for shipment. Reservations are accepted in strict sequence of receipt and should be mailed by February 28, 1987. To order, mail your Reservation Application, or call **TOLL FREE 1-800-228-5000** now.

Cedar Furniture for Casual Living

From Walpole Woodworkers, New England's foremost outdoor furniture company comes naturally beautiful, handcrafted cedar furniture . . . chairs, swings, picnic and occasional tables, and more . . . plus charming and practical items for your home, yard, porch or patio. Satisfaction guaranteed. **Send for our color catalog, "Leisure Living."**

Enclosed is $1 for Walpole's "Leisure Living" catalog.

Name

Address

City

State Zip

Walpole Woodworkers®

767 East Street, Dept. S187, Walpole, MA 02081
Questions? Call toll free 1-800-343-6948
Mass., Alaska and Hawaii resident call (617) 668-2800

100% Cotton

BUSH vest $39

A walking desk with a drawer for everything, our multi-pocketed Bush Vest is made of worldly-wise pre-washed 100% cotton.

Send $1 for catalogue

#3331
Khaki, olive drab.
XS S M L XL
Imported

BANANA REPUBLIC
TRAVEL & SAFARI CLOTHING Co

Send Check, Visa, Amex, M/C, DC to 224 Grant Avenue,
Department H53, P.O. Box 7347, San Francisco, CA 94120
Add CA, NY, TX Sales Tax and $2 for Shipping
Order Toll-Free 1-800-527-5200

Picture yourself in the world of a Princess.

For reservations and information, see your travel agent or call 800-223-1818; in N.Y. State 800-442-8418; in N.Y. City 212-582-8100; in Canada 416-964-6641.

PIERRE MARQUES
A PRINCESS HOTEL
ACAPULCO

ACAPULCO: Acapulco Princess. Pierre Marques. BAHAMAS: Bahamas Princess Resort and Casino
BERMUDA: Southampton Princess. The Princess. Represented by Princess Hotels International, Inc.*

World's largest tick, engorged female, dwarfs normal-sized female of same species.

best resource of its kind in the world.

Fascinated by superlatives, I drove over to the Museum Support Center recently to see the place and check out the ticks. It was almost four years ago that I saw the Center, newly built and not yet open. Now it's fully used, the huge empty storage bays that I wrote about in May 1983 are well-filled, and in the offices, the carpeting is well-worn. Phones ring, computers click, people chat—just as if they'd been here for generations.

The Entomology Department is near the front desk. I signed in to please the security guard, and was met by Dr. James E. Keirans, who is putting together the new tick center. He was an old friend and colleague of Harry Hoogstraal, and he started my briefing by telling me something about the man: Hoogstraal is a Dutch name; he researched parasite-host relationships in Africa for some 38 years, all but one of which were spent in Cairo, where he headed the Medical Zoology Department of the Naval Medical Research Unit; he wrote more than 500 publications; he was a broad-based scholar, expert at growing cacti, at understanding ballet, at discussing Middle East politics, at sculpture.

Hoogstraal was just 69 when he died. He'd been terribly injured in 1941, in Mexico, when an expedition truck rolled on him and dragged him. "Harry wasn't supposed to live," Keirans told me. "So many broken bones, so much torn skin. But two doctors who were visiting Mexico City had some of the new sulfa drugs. Anyway, after six months in the hospital he could walk with a cane and was soon off on another expedition. For the rest of his life his back was a little hunched and he obviously suffered pain, but he never mentioned it."

Hoogstraal's work with ticks led him far beyond Africa—to Nepal, New Guinea,

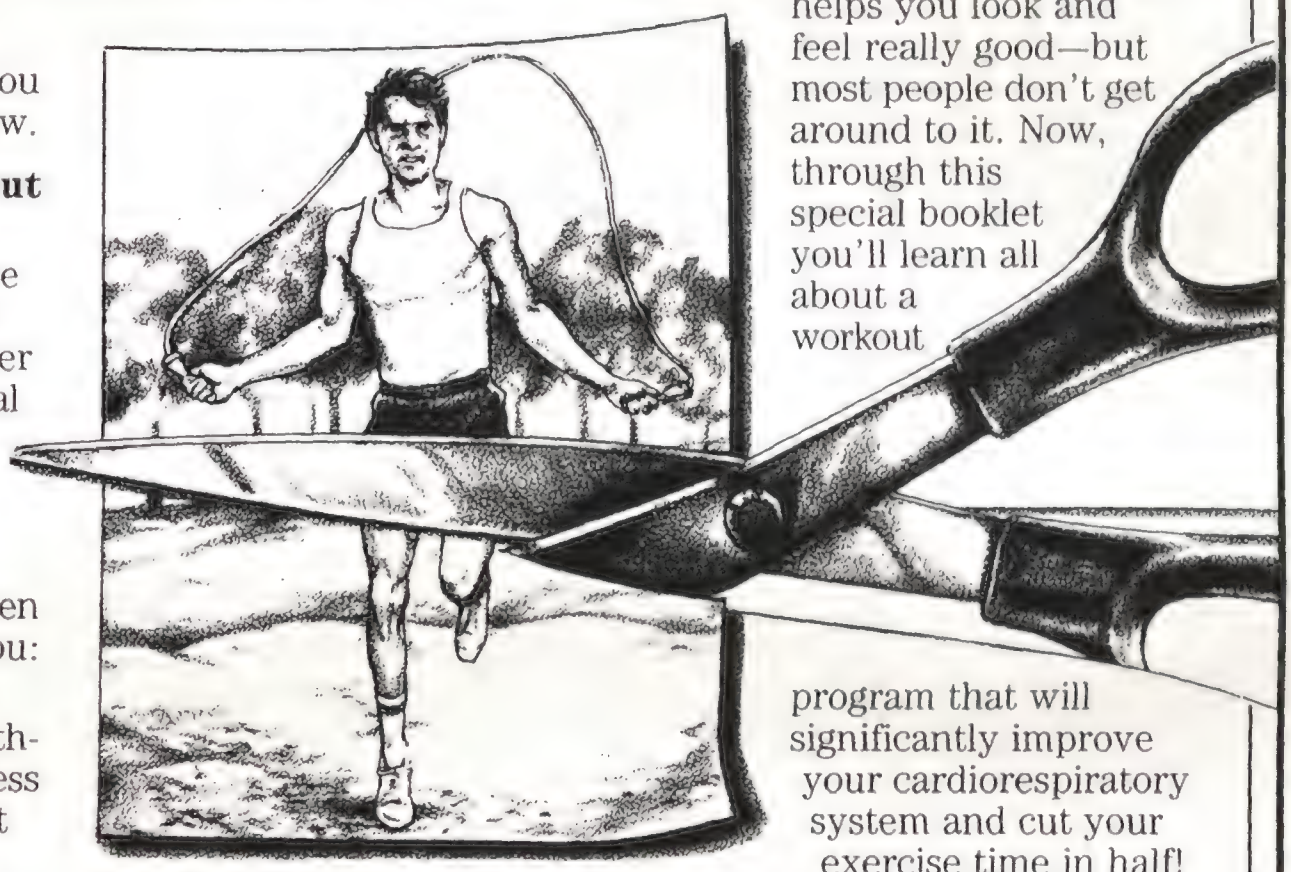
Free Facts That Can Cut Your Exercise Time In Half

Find out how you can exercise your entire cardiorespiratory system with the GUIDE TO BETTER HEALTH AND FITNESS—A 12 Minute Aerobic Workout from Lifecycle® It's yours absolutely Free when you mail in the coupon below.

A Challenging Workout in Only 12 Minutes

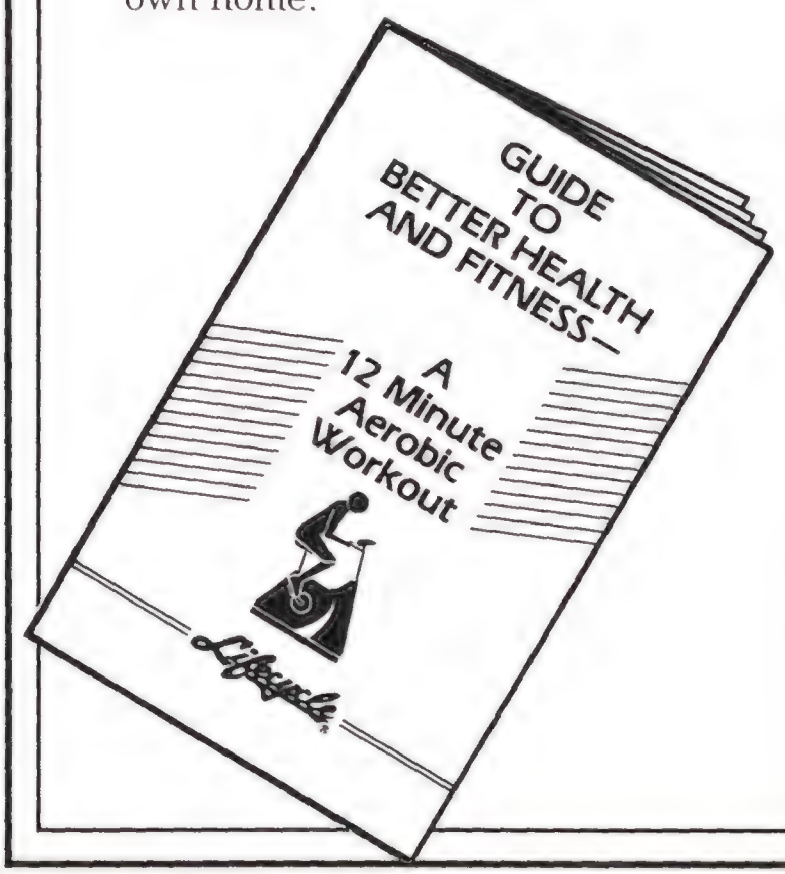
You can get an extensive cardiorespiratory workout for a longer, healthier life just by doing a special 12 minute routine a few days a week. This 16 page, fully-illustrated booklet tells about an easy, proven method that can help you:

- Improve your cardiorespiratory system without causing severe stress or strain to your heart
- Burn off calories in a minimum amount of time
- Decrease your permanent body fat
- Develop a trim, fit body from the privacy and convenience of your own home.



You'll Look and Feel Better

Studies show aerobic fitness helps alleviate everyday stress. It also helps you look and feel really good—but most people don't get around to it. Now, through this special booklet you'll learn all about a workout program that will significantly improve your cardiorespiratory system and cut your exercise time in half! And it's so easy, your whole family can do it.



Send for the Free Facts Today

All you have to do to get your Free Booklet is return this coupon below to **Lifecycle, P.O. Box 14026, Orange, CA 92613** or ***call toll-free 1-800-544-3004, Dept. J23***

Lifecycle® Aerobic Trainer

Send For Your FREE Booklet Today!

YES, I want to cut my exercise time in half! Please send me my FREE copy of the GUIDE TO BETTER HEALTH AND FITNESS—A 12 Minute Aerobic Workout by Lifecycle®
I understand I am under no obligation.

MAIL TO: **Lifecycle**
P.O. Box 14026
Orange, CA 92613

(Please Print)

Name_____

Address_____

City_____ State_____ Zip_____

Telephone_____

J23

PAPERWEIGHTS

Please send me:

☐ The collection of three millefiori paperweights from Perthshire, Scotland. $125

☐ *Collectors' Paperweights—Price Guide and Catalogue*, 192 pages, full color. $15 (Free with purchase of the Perthshire collection.)

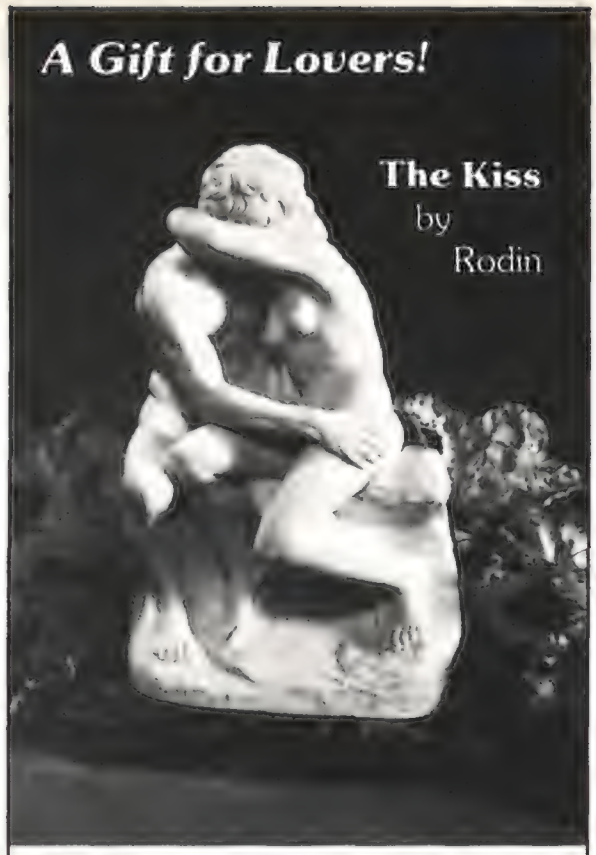
☐ Information about paperweights.

California residents add local sales tax.

To order, call or send this ad to:

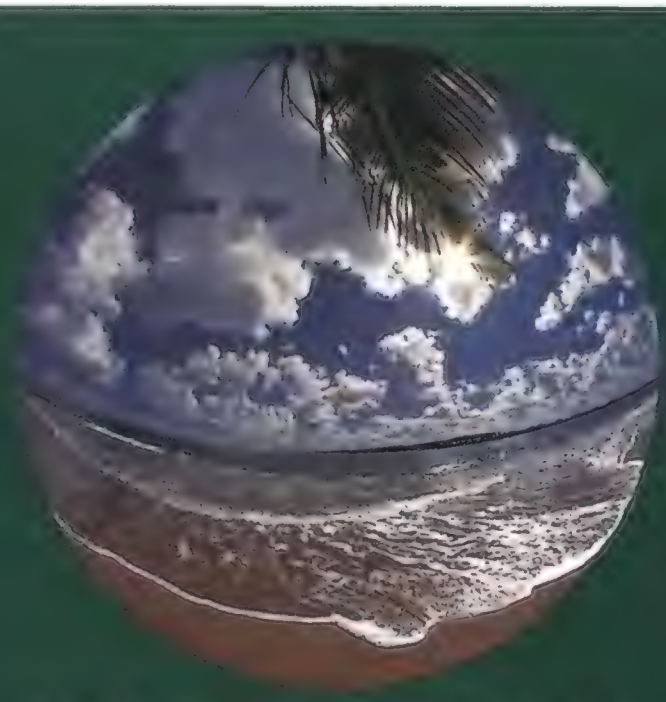
L. H. Selman Ltd.
761 Chestnut Street, Suite 1F
Santa Cruz, CA 95060
Toll-free 800 538-0766
In California 408 427-1177 collect

Name _____
Address _____
City _____ State ___ Zip _____
Check enclosed ☐ MC ☐ VISA ☐
_____ Exp. _____



The Romantic Beauty of Rodin's ever popular masterpiece, *Le Baiser*, is superbly reproduced in this 10½", 6 pound statue formed from bonded marble with a marble base. $132 ppd. (check, Visa, MC. Unconditional guarantee. 39" hand carved marble reproduction also available. . . $15,000 plus freight. **104 page artbook color catalog of 230 items, $5.**

ELEGANZA LTD.
Importers of Fine Statues
Magnolia Village • 3217 W. Smith #13
Seattle, WA 98199 • 206-283-0609



The world from a Sailfish Point of view.

Paradoxically, this island community, so private and self-contained, opens new worlds. Walk on an unspoiled beach to refresh the spirit. Dine at the Club with new friends. Play a Jack Nicklaus-designed par 72 course to sharpen your game. Cruise off shore, letting the coastline and your cares drop from view.

For a new world discovery, call or write Sailfish Point.

a Mobil company

Sailfish Point®

1755 S.E. Sailfish Point Blvd., Suite M107,
Hutchinson Island, Stuart, Florida 33494, (305) 225-6200

Single-family and condominium homes. Prices begin at $300,000. Sailfish Point Realty Corporation is the Licensed Real Estate Broker and Exclusive Sales Agent. Broker participation invited. The complete offering terms are in an offering plan available from sponsor. An offering statement filed with the New Jersey Real Estate Commission neither approves the offering nor in any way passes upon the merits and value of the property. (NJA No. H1086083FL.) Offer void in states where prohibited by law including Maine and California. The Sailfish Point Golf Club is a private facility.

the Philippines, Southeast Asia, all over. For, as James Keirans pointed out to me, ticks are the world's most notorious carriers of the agents of diseases that strike animals, wild and domestic. And they rank second only to mosquitoes in their deleterious effect on humans.

Even so, it's only a few species of these little parasites—some barely large enough to see with the naked eye—that carry the diseases that affect humans. In this country, we've all been aware, to some extent, of Rocky Mountain spotted fever. But generally we Americans have thought of the danger from such parasites as being exotic—something you might run into "romancing the stone," something Bogie and Kate might face, battling through the swamps with the *African Queen*.

If you read last April's SMITHSONIAN article about Lyme disease, you'll have changed your mind. It's a nasty but hardly ever fatal affliction caused by a small deer tick (*Ixodes dammini*), which may transmit a spirochete into your bloodstream while you're strolling through familiar suburban property right in the heart of the Eastern establishment. First discovered in such distinct northeastern areas as Lyme, Connecticut, it's now spreading.

Other diseases remind us that unfriendly ticks aren't confined to distant tropical lands. Tularemia (rabbit fever)—also tick-borne—was named for Tulare County, California, where it first appeared. There's also Colorado tick fever and American Q fever, and other unpleasant things which are carried by true-blue American ticks and which affect mammals—including you and me.

Dr. Keirans explained that there are two basic kinds of ticks—soft ticks and hard ticks. Soft ticks are primarily nest parasites and feed for short periods, several times. Mature females feed fast, drop off, lay some eggs, reattach, feed fast, drop off, lay more eggs, etc., and finally die. Hard ticks, however, are mainly host parasites and will latch onto their hosts for up to five or six days. The mature females feed just once for a long time, drop off, lay a whole lot of eggs and then die. Thus, it's usually the females of the hard tick variety that we pick off ourselves after a foray into the woods. It's the females that do most of the latching on because they need the nourishment for egg production.

Keirans told me that under optimum laboratory conditions hard ticks will live only one to two years without a meal. Soft ticks, however, are generally a lot

TAKE ANY 3 FOR $1.00 EACH

(with Trial Membership)

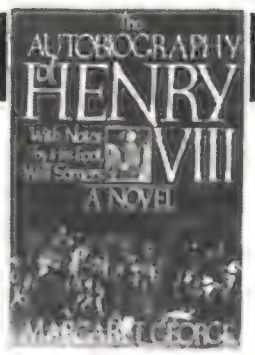
(First price is publishers' list.
Boldface shows Members' Price.)

EMPIRES AND THEIR LEGACIES

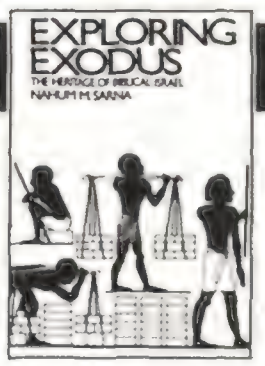
1339. **The Discovery Of King Arthur,** *by Geoffrey Ashe.* Extracts fact from legend in search of the "once and future king." $18.95/**$14.95**

4390. **The Riddle Of The Dinosaur,** *by John N. Wilford.* Rise and fall of the most extraordinary beasts to walk the earth. $22.95/**$16.50**

7047. **Ancient History: Evidence And Models,** *by M.I. Finley.* What we can & what we can never know about the Graeco-Roman world. $17.95/**$14.50**

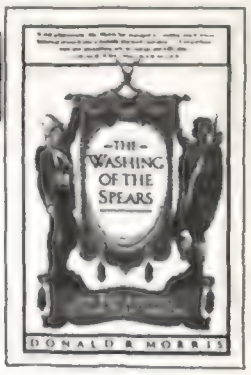


3509. $19.95/**$15.95**



2246. $17.95/**$15.50**

A3475. $49.95/**$32.95**
(Counts as 2 of your 3 selections.)



2436. $21.95/**$15.50**

STATESMEN, GENERALS & THE RULING CLASS

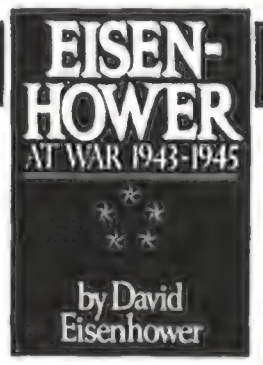
1446. **The March Of Folly: From Troy To Vietnam,** *by Barbara Tuchman.* How governments have sabotaged themselves. $18.95/**$13.95**

2089. **Kitchener: The Man Behind The Legend,** *by Philip Warner.* A great, faulted & committed human being–Britain's super-hero. $15.95/**$12.95**

2360. **The Education Of Julius Caesar: A Biography, A Reconstruction,** *by Arthur Kahn.* Hails Rome's outstanding leader. $28.50/**$18.50**

4416. **Our Tempestuous Day: A History Of Regency England,** *by Carolly Erickson.* An opulent yet tragic age vividly portrayed. $18.95/**$15.50**

7914. $22.95 **$16.95**



1917. $29.95/**$22.50**

6171. $27.50/**$18.50**

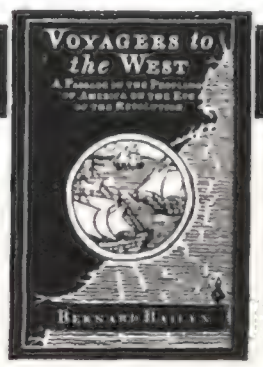
3244. $29.95 **$19.95**

TIMELESS ISSUES, ENDURING IDEAS

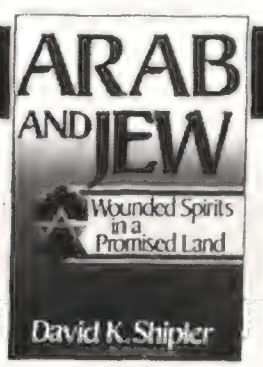
3012. **The Bible As History, 2nd Revised Ed.,** *by Werner Keller.* Archaeology and science document biblical history. $14.95/**$10.95**

4911. **The Structures Of Everyday Life: The Limits Of The Possible, 15th-18th Century (Civilization And Capitalism, Vol. I),** *by Fernand Braudel.* Socioeconomics. $31.95/**$15.50**

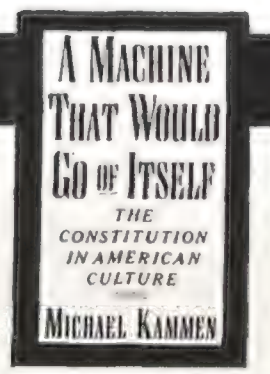
5264. **Novus Ordo Seclorum: The Intellectual Origins Of The Constitution,** *by Forrest McDonald.* A splendid achievement. $25.00/**$17.00**



2279. $30.00/**$18.50**



2402. $22.50/**$17.50**



2485. $29.95 **$19.95**

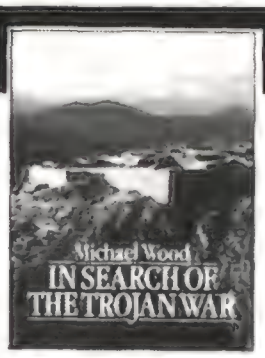
2899. $27.50 **$18.50**

THE WARRING WORLD

8284. **The Devil's Horsemen: The Mongol Invasion Of Europe,** *by James Chambers.* The story of the Golden Horde. $11.95/**$8.95**

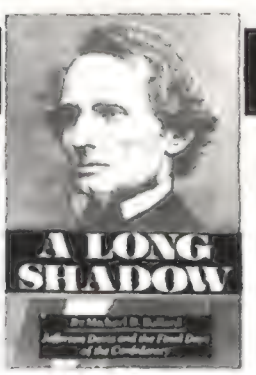
4648. **Hitler's Mistakes,** *by Ronald Lewin.* The Fuehrer's shortcomings–his persistent errors of judgment & unnecessary actions. $14.95/**$12.50**

1859. **The Celts: The People Who Came Out Of The Darkness,** *by Gerhard Herm.* An epic study of 2,000 years. $15.00/**$10.50**



4879. $22.95/**$16.95**

3376. $20.00/**$15.95**



2394. $22.50 **$16.50**

4523. $19.95/**$14.95**

Save on the best recent history titles. *Including this Introductory Offer,* you can save more than 30% during your initial Trial Membership, on some of the finest history books being published today. Our list covers a wide variety of topics, such as American personalities, Civil War, European history, science and religious thought.

We don't sacrifice quality. The History Book Club always offers its members quality publishers' editions, never "economy" reprints. All our books are available to members at truly substantial savings.

Choose any 3 for $1.00 each. Simply select any three books shown on this page — for just $1.00 each when you take a fourth book at the low Members' Price. Every month you will be able to choose additional selections from the 150 to 200 books described in the Club's magazine. You need take only four more selections during the next two years, always at the low Members' Price. Once you have completed your initial membership, you can qualify for additional savings through Bonus Books that you can select from our entire list.

How the Club works. Every few weeks (14 times a year), you will receive our *Review* and a dated reply card. If you want the Editors' Choice, do nothing — the book will come automatically. If you want another book, or no book at all, return the card by the date specified. (Book shipments will be charged to your account at low Members' Prices, plus postage and packing.)

If you should receive an unwanted book because you had less than 10 days to decide, you may return it and pay nothing. We guarantee postage.

THE HISTORY BOOK CLUB, DEPT. N,

40 Guernsey Street, Box 790, Stamford, CT 06904-0790

Please enroll me as a Trial Member and send me the four books whose numbers I have listed below. Bill those on the left at $1.00 each and the fourth at the low Members' Price, plus postage and packing.

[ ] [ ] [ ] [ ]

I may return the books within three weeks at your expense and owe nothing. Or, I will buy four more selections within the next two years, *not including my choices above.* I can cancel my membership anytime thereafter. All Club purchases are at low Members' Prices, and a postage-and-packing fee is added to all shipments. ST93SP

Print Name_____

Address_____ Apt.# _____

City_____ State_____ Zip_____

In Canada: Mail to U.S. Address

BA87A

FREE

PGP

Mustard with Fresh Shallots & Chervil FREE*

Imported from France by

*S&H extra

Pierre Gerardaux

New! Unique! What a delight with meats, fish, salads. Prepared carefully and strictly with the freshest and finest ingredients. Enjoy your **FREE** jar plus a **FREE** Gourmet Brochure with more Mustards and Specialty Foods from Europe. Use your certificate below.

Your Free Mustard Certificate #3004

PGP

Your Free Mustard Certificate #3004

☐ Oui, Pierre, send me my **FREE** 3.17 oz. jar of your finest Mustard with Fresh Shallots & Chervil & **FREE** Gourmet Brochure. I enclose $1.50 shipping & handling.

Make payable and send to:

Pierre Gerardaux/Dept. A23

300 Chestnut St., Middlesex, NJ 08846

Name _____

Address _____

City _____ State _____ Zip _____

Ariel Sands
BEACH CLUB
The essence of Bermuda's finest traditions
• an extraordinary experience
• a superb location
• an unusual value
Delicious dining, tennis day & night, super snorkeling, a restful beach
call directly toll free
1-800-468-6610
or ask your travel agent for further information

more patient. Some have been known, under the same conditions, to wait more than 20 years for a good feed.

Since the danger from ticks is worldwide, the study of them has absorbed scientists for about a century. One of them was George Henry Falkiner Nuttall, a renowned Cambridge scientist who died 50 years ago. James Keirans interrupted himself to fetch an enormous book, written by himself and published by the Department of Agriculture, on the Nuttall tick collection. The book has 1,785 pages and weighs so much I should have had special shocks on my car when I drove it from the Support Center.

Why so big? Because it contains a complete catalog of the ticks Professor Nuttall gathered from roughly the turn of the century until his death. They're all there, forming a history of collecting from 1879, when a male *Dermacentor occidentalis* was picked up near San Rafael, California, to 1935, when two males and a female *Amblyomma parvitarsum* were plucked off a llama in Argentina. They total about 4,000 collections.

I took the opportunity to find out just what constitutes a collection—something I'd never previously dared admit I didn't know. As far as ticks go, said Keirans, a collection is anything taken from one host. Maybe one tick, maybe 100. "If I shoot a rabbit and collect ticks from it," said Keirans, "and then shoot another one five minutes later and collect its ticks, that's two different collections. If I flag one area for three hours—that means shaking the ticks off bushes—what I get is only one collection."

I read that in 1939 the Nuttall tick collection went to the British Museum (Natural History) and for a while it ranked Number One in the world. But by the time Keirans was asked to put together his tome about it, he was with the Rocky Mountain Laboratories of the U.S. Public Health Service, and it, too, boasted a pretty hefty number of ticks. That collection was transferred to the Smithsonian in 1983. Now, with the addition of the Hoogstraal collection, the Smithsonian is, unquestionably, Number One in the tick game. Not only does it have more ticks than anyone, but its computer system, over at the Museum of Natural History, is being fed all the data from all the major collections.

I know what computers look like, but I really wanted to see a tick or two. James Keirans proudly showed me some quite beautiful scientific drawings of them and then took me on a tour of the storage area where the Hoogstraal crates were being unpacked.

We walked through some office spaces. "These are all tick people in here," Keirans remarked. "The mosquito people are all down that hall, and the flea people work over there." He led me to a storage bay, cool and dry. "This is Pod Three," he said. "Wet collections. That is, everything's in alcohol.

"Plain brown or black ticks we can photograph using the SEM—the scanning electron microscope," Keirans continued. "To record the ones with coloration on their shells we have to use artwork. The SEM won't pick up ornamentation."

He showed me the microscope—table-size—and beside it a perfectly golden tick. I thought it was a piece of jewelry of questionable taste. "We gild them," Keirans said. "We coat them with a very thin layer of gold, which helps us get clear, precise pictures with the SEM."

Keirans said that the proposed center has plenty of new things to discover about ticks. In 1962, entomologists at the Rocky Mountain Labs isolated a virus that circulated in the blood of terns in the Dry Tortugas. Now scientists have found at least 60 of these seabird viruses. Thanks to ticks, some can get into human populations. Seabirds seemed to me a strange place for ticks. Not so. "They get on almost everything—on all classes of vertebrates except fishes," Keirans told me.

"Look," he continued. "I must warn you that people sometimes get a little antsy when they talk to me. Ticks are bad news. They'll climb on a bush and hang on with their third pair of legs, and wave their first pair around because that pair can sense carbon dioxide. When they sense it, they're ready to latch on.

"And some have eyes, and can tell sunlight and shadow. I've seen places in western Montana where you can go on a trail and when the sun is just right, you can get down low and actually see the ticks waiting along the way, waving their legs gently. And when you move your hat up and down to throw a shadow across the trail, the legs speed up and reach out for whatever's coming."

"My God," I remarked. "I'm never going to walk through western Montana."

I hastily gathered my gear and said good-bye to James Keirans, wishing him well with fund-raising for the Hoogstraal Center. And once safely in my car I rolled up my pants and had a very careful look.

Edwards Park

Announcing the very first porcelain and bronze sculpture by one of America's foremost wildlife artists —original art of extraordinary realism capturing the full glory of the majestic Bald Eagle...

The Hunter

by W.D. Gaither

height: 7″
wingspan: 6″

Soaring past the limits of human vision...gliding effortlessly high above our sparkling coastal waters... plummeting suddenly from enormous heights, the majestic Bald Eagle seems almost more spirit than bird. And now, in order to capture the full beauty and strength of this magnificent bird, renowned wildlife artist W.D. Gaither has married two powerful media creating *his first sculpture ever in porcelain and bronze—The Hunter.*

This powerful work of art depicts the eagle just as he breaks his dazzling plunge—the instant before he seizes his prey. The finely sculpted bisque porcelain reveals every feature and contour in perfect detail. And the extraordinary strength of the solid cast bronze allows the artist to portray the bird poised in midair with unsurpassed sculptural freedom.

Each sculpture individually formed, painted by hand, and signed by the artist

The Hunter will be formed of the finest porcelain by master artisans in Gaither's own studio in Japan. The sharp forceful talons and gnarled pine will be cast in bronze by the painstaking Lost-Wax technique. Then the sculpture will be hand-finished with a rich patina and hand-painted with meticulous care.

Upon its base, the finished work will bear the engraved signature of W.D. Gaither and the title *The Hunter.* And it will be accompanied by a Certificate of Authenticity.

Available by direct commission only

The Hunter will be crafted to private commission only. It will never be offered through any stores or dealers. So to acquire this unusually distinctive original work of art, please mail your Commission Form by December 31, 1986. *Your satisfaction is completely guaranteed.*

VALLEY FORGE GALLERY
P.O. Box 752, Valley Forge, Pennsylvania 19482

For your convenience on credit card orders, call TOLL-FREE 1-800-FOR-INFO
(1-800-367-4636).
In Pennsylvania, 1-215-337-1864.
Ask for Extension 50.

Please mail by today ▶

COMMISSION AUTHORIZATION FORM

Please enter my commission for *The Hunter* by renowned naturalist and sculptor W.D. Gaither. I understand that I need send no payment now. I prefer to pay as follows:

☐ DIRECT. I will be billed for my deposit of $36.25 in advance of shipment. After shipment, I will be billed the balance in three monthly installments of $36.25*

☐ BY CREDIT CARD. After shipment, please bill the total amount of $145* to my credit card below:

☐ American Express ☐ VISA ☐ MasterCard

Card Number_____ Expires_____

Signature_____
All commissions subject to acceptance.

Name_____

Address_____

City_____ State_____ Zip_____

**Plus $4.50 for shipping and handling. PA state sales tax will also be billed if applicable.*

Please allow 6 to 8 weeks for shipment.

Make Great Strides Toward Fitness with the Fitness Master LT-35

Simulates cross country skiing, regarded by experts as the top aerobic exercise. Rated higher than jogging, rowing, biking, or swimming.

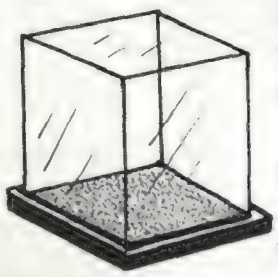
- Reduces body fat and improves muscle tone.
- Strengthens heart and lung capacity.
- Fluid motion — no jarring impact on bones and joints.
- Comfortable upright exercise position makes full use of upper and lower body muscles.
- Stable — the unit rests flat on the floor. uses nonslip foot motion and sturdy arm poles.
- Can be used by men or women regardless of size, weight, or fitness level. Height and resistance adjustable.
- Weighs under 35 pounds. Portable — folds instantly to only 5" high for easy storage under a bed.
- 30 day home trial. MasterCard, Visa, American Express accepted.
- 2 year warranty.

Call for a FREE BROCHURE — And ask about our New Video!

TOLL FREE: 1-800-328-8995
In Minnesota: 1-612-474-0992

fm
Fitness Master, Inc.
1387 Park Road, Dept. Sm
Chanhassen, Minnesota
55317

DISPLAY CASES



PROTECT AND DRAMATIZE YOUR PRECIOUS WORK OF ART

CUSTOM MADE
clear lucite on a finished wood base

SEND DIMENSIONS • LENGTH • WIDTH AND HEIGHT • WE WILL QUOTE PRICE

FOR ESTIMATE OR ADVICE
CALL 804-442-2299
OR WRITE
THE DISPLAY CASE CO.
Box 8800, Exmore, VA 23350
SATISFACTION GUARANTEED

Italia Adagio

Italia Adagio is alive and well and traveling happily in Italy and France. We are unrivaled experts on in-depth tours, for the intelligent traveler who abhors the *forced marches* of mass tourism. Send for our literature and see how different we are.

Detailed brochures available from:

Italia Adagio Ltd.
P.O. Box 752, Dept. A, Freeport, NY 11520
(516) 868-7825 • (516) 546-5239

Phenomena, comment and notes

'Walking the dog' is a fortuitous excuse to wander the woods and marshes of an island memorial to a naturalist President

Life is often what we choose to call it. Jesuits used to tell of the seminary novice who asked his spiritual adviser if it was all right to smoke while meditating. The adviser was shocked at the very thought. Another novice had a better way. He asked his adviser if he could meditate while smoking. "Bless you, my son," came the reply. "Your spirituality is an example to us all."

Sharing one's life with a dog calls for the same mental agility. It makes no sense to go bird watching with a dog: all you get to see is your dog frisking ahead on the trail, while ahead of him feathered silhouettes are disappearing into the bushes. But if you are out dog walking, why not carry binoculars?

During the week, the resident dog and I confine ourselves to the neighborhood streets, where there is a fair amount of olfactory stimulation but otherwise little to capture the attention of a once country animal. On weekends, though, we head for Roosevelt Island, an 88-acre refuge in the Potomac River across the water from the Kennedy Center and the crowds of Georgetown. Once over the pedestrian bridge we are in another, older world. Leo is a golden retriever (there's a lot of that going around the office; see the last page of the November issue and page 18 in this issue), and he carries his tail like a joyful flag as we careen down the muddy trails, trotting from one delightful scent to the next. While he sniffs, I try to differentiate one sparrow with a streaked breast from another, dithering over whether a crown is

A REGAL BRIBE TO INDUCE YOU TO TRY THE COFFEE FAVORED BY KINGS.

Here's a gift to introduce you to magnificent Gevalia® Kaffe: an imported white ceramic Regal Canister embossed in gold with the Royal Crest of Sweden. An $18.00 value, it's yours free with trial membership in the Gevalia Kaffe Import Service.

Much as you will enjoy the way your Regal Canister preserves coffee freshness, we believe what you will most treasure is the experience of drinking Gevalia.

It all started 134 years ago in the seaport town of Gävle, Sweden, when Victor Theodor Engwall was seized by an obsession: to produce the world's most superb cup of coffee. Month after month, he experimented with the best and most exotic coffees that came into port until at last, in 1853, he produced a uniquely perfect cup of coffee. They say that one chilly day, King Gustav V stopped in Gävle and tasted it. So enchanted was he that from then on, Gevalia was appointed coffee to His Majesty and the Royal Court of Sweden.

Victor Th. Engwall

SWEDEN'S MOST BELOVED COFFEE

Today, this remarkable coffee is still made there by people imbued with Engwall's obsession for perfection, and Gevalia has become Sweden's most popular, most beloved coffee.

That's quite an achievement since Swedes feel as passionately about coffee as the French do fine wine. They appreciate that up to 6 varieties of highly prized Arabica beans from coffee-growing countries like Kenya, Guatemala, and Costa Rica are blended and balanced with infinite care in order to create the high flavor notes, the delicate nuances in Gevalia.

By Appointment to His Majesty the King of Sweden.

There's yet another secret to Gevalia's flavor: its impeccable freshness. Even the finest whole beans rapidly grow stale when exposed to air in gourmet shop bins. But Gevalia is roasted in small quantities and immediately vacuum sealed in golden foil ½ lb. pouches to preserve the just roasted freshness.

Whole Bean.

Ground.

REGULAR & NATURALLY DECAFFEINATED

Gevalia® Kaffe comes whole bean—we will grind it for you if you prefer—in a variety of full-bodied roasts. But perhaps the biggest revelation is Gevalia Decaffeinated. Caffeine is removed naturally by a European process using the same substance that creates the effervescence in sparkling water. The result: coffee that maintains full coffee flavor. Now, drinking decaffeinated is no longer a compromise.

As this exceptional Swedish coffee is not available in mass market quantities, the only way to order it is from our Import Service. Just fill out the attached reply form. The Regal Gevalia Kaffe Canister is yours free with trial membership.

But, fair warning. Once you sip superbly fresh, rich Gevalia, you're likely to become obsessed with it.

GEVALIA
KAFFE

A SWEDISH OBSESSION

© 1987 Vict. Th. Engwall & Co. If reply form is missing, for full details please write to Gevalia Kaffe Import Service, Dept. W, P.O. Box 5223, Clifton, N.J. 07015. Or call 1-800-441-2528.

buffy or rufous. We always turn downriver first, and after about half a mile arrive at a wooden bridge over a channel that feeds the marsh in the center of the island. Leo immediately picks his way across the mud and launches himself into the water, drinking as he goes, until the water is up to his snout. He explores, nosing along the banks, a blond alligator on the prowl. Then he's out, standing by me on the bridge, soaking wet, feet booted with dark mud, a thoroughly happy dog.

We do see birds there: wood ducks, kingfishers, great blue herons going about their business despite the urban bustle all around them. The National Park Service check list for the island names 192 species of birds that have been seen there; so far our list is up to 19. But we only started in the fall, and we'll be ready for the spring rush.

The island, like almost any place in the East, is not untouched. It was a farm in the early 19th century, the estate of John Mason and apparently a hot spot in the Washington social scene. Almost all the original trees were cut down and exotic species introduced; the English ivy is doing well to this day. In 1931 the Theodore Roosevelt Memorial Association bought the island to turn it over to the federal government a year later. The memorial itself, a 17-foot bronze statue in front of a 30-foot-high shaft of granite, overlooks an oval terrace.

Some spots are beautiful. One day last fall, Leo and I were working our way along an informal trail halfway up the ridge that parallels the west side of the marsh. I was watching for birds along the water below; he had turned himself into a 70-pound squirrel detector. I turned and looked back toward the sun. From ground to sky, the air was filled with glowing, yellow ovals, the balloons and lanterns of a magical woodland party. They were the 12- to 18-inch backlit leaves of umbrella magnolias, a pure stand on a patch of hillside. With the sun at our backs, they had been just big, yellow leaves, ready to fall. Looking into the sun, an unremarkable bit of secondary growth became a vision, a moment of heightened aliveness. How to explain it?

"What did you do Saturday?"

"Uh . . . took the dog for a walk."

As naturalists we have a long way to go; my best guess is that considerably more than 19 species of birds were to be found on Roosevelt Island last fall. Sometimes a single incident better serves to calibrate one's ignorance. From the marsh bridge one looks north up the channel. Along the east side, in a nearly straight line, are four trees which when I first saw them had already turned a reddish brown. Others were growing at the head of the marsh. I couldn't see the leaves, even with binoculars, but thought they must be very small and delicate, something like willow leaves. So I just gave them a name; a notebook entry might read: "Great blue flies across marsh from NW to SE; lands in top of 'red, fringy' tree."

One fine day, however, a cold wind and driving rain meant Leo and I had the island to ourselves and I decided it would cause no scandal to leave the trails entirely. We slopped our way out into the marsh, to the first of the red, fringy trees. First I saw it was a conifer, covering the ground with its needles and twigs. It is dying, I thought to myself, they are all dying, maybe from the flood

East meets best. Royal

of November '85. By now I was all but tripping over the buttresses, the "knees" that this tree apparently grows to help get air to its roots. Finally the field guide practically grabbed my arm and shouted that this was a bald cypress, that it sheds every year and was doing just fine.

After just two months of walks, I had discovered a bald cypress swamp within the District of Columbia. Not bad for somebody just walking the dog. To me as a Northeasterner, "bald cypress" sounds Southern and exotic, an unknown world where cottonmouths and alligators live. My swamp turned out to be a little less exciting. I read in the latest *Atlantic Naturalist* that cypress had, indeed, once thrived in Washington. Logs 100,000 years old were discovered during excavations for the Mayflower Hotel in 1922. Then the author, John V. Dennis, threw a little water on my parade: "Ten to fifteen bald cypress trees bordering a lagoon at Theodore Roosevelt Island in the Potomac were planted by the Civilian Conservation Corps in 1935." Shucks.

The birds are "natural," though, if anything is, and there for the seeing. And there's something special about seeing one as majestic as a great blue heron flying in unhurried dignity against a background of smokestacks and office buildings. They fish the shores and roost in the trees, keeping their distance from tourists and dog walkers. When human traffic is slow, they come closer. One we have watched from the marsh bridge uses a blind while fishing. An old log lies in the mud a little way up the channel. When the tide starts to come in, the log is covered so that only a branch is visible, hanging over the water at about a 45-degree angle. The heron takes his station under the branch, assuming the same angle, unmoving until it sees something and stabs into the water.

In other circumstances, heron watching can be dramatic. Archie Carr, the zoologist who gave the world an appreciation of sea turtles, watches herons on his pond in Florida. He reports from time to time in "Life Lines," his column in *Animal Kingdom*. His pond also boasts a resident alligator, and every year, when the new clutch of alligator eggs hatches, a great blue stalks the babies. "On any summer day," Carr writes, "if you hear violent thrashing and strangled croaks from across the pond, you are sure to see white water over there and, in its midst, the heron flailing desperately away with the gator close behind him, half out of water, seemingly walking on her tail."

There are no alligators (see page 36) on Roosevelt Island—perhaps it's just as well. It is not the place to go for wildlife adventures. As a place to walk the dog, however, it deserves three leashes. We still have 173 birds to check off the list and there's no telling what further botanical discoveries await us. Beavers are at work; foxes we have yet to see have decimated the rabbit population.

One of the virtues of city-dog biology is that they have to be walked; it cannot wait for nice weather or when one has the time. And so on those nasty days, when the less fortunate are all snug and warm inside with coffeepot and Sunday papers, we go for a quick walk up and down the trails, past the jumbled mounds of earth where once a mansion stood, across the frozen marsh, around the monument to a real outdoorsman. Then it's home for soup and biscuits.

John P. Wiley jr.

Viking's China/Orient.

Ships of Norwegian Registry and Spirit

Why just cruise the Orient when you can cruise the best — Royal Viking Line. No other 5-star line has cruised this part of the world for as many years. With as much cultural depth. Or more breadth of itineraries. All come enticingly wrapped for you in two-week vacation packages of exceptional value between Hong Kong and Japan or Bangkok this spring, summer and fall.

No one offers you more of the Orient. Or more value. Enjoy free air fare or low air add-ons, 3 free nights in Hong Kong or Bangkok. (Non-use credits available). In China, a Beijing stay and shore excursions included.

China in Depth (Spring & Fall) $4,136 — $12,375
China/Japan Showcase (Summer) $3,665 — $9,089
Shogun Summer $3,022 — $9,154
Jewels of the Orient (Fall) $3,777 — $10,413

ROYAL VIKING LINE **800-862-1133 (Georgia: 404-237-3526).**
Contact your travel agent today! Call for a brochure. Or write Royal Viking Line, 750 Battery St., San Francisco, CA 94111.

Name *Phone*

Address

City/State/Zip

Past cruises: ☐ *None* ☐ *Royal Viking Line* ☐ *Other* 7MORSS0101
Vacation Length: ☐ *7-10 days* ☐ *11-14 days* ☐ *Longer*
Foreign Travel: ☐ *Europe* ☐ *Orient/South Pacific* ☐ *Mexico* ☐ *Caribbean* ☐ *None*
Age: ☐ *25-44* ☐ *45-64* ☐ *65+*

Royal Viking
The best of all worlds all over the world.

If you like to run against the wind...

© 1986 Audi

You're ready for an Audi.

An Audi driver seldom worries about which way the wind is blowing.

It isn't that an Audi isn't susceptible to the wind. Like all cars, Audis have to deal with head winds, tail winds and crosswinds alike.

But, unlike most cars, the Audi 5000S has been engineered to offer as little resistance to the wind as possible.

Which puts the owners of the 5000S in a rather enviable position. The car they bought for its good looks just happens to be one of the most aerodynamically efficient luxury sedans in the world.

Holding fast to the Audi philosophy of "challenging conformity," the engineers at Audi were able to fashion an automobile with the incredibly low drag coefficient of 0.32. In fact, virtually everything about an Audi is designed to reduce drag. From its flush-mounted windows to its aerodynamically correct alloy wheels, the Audi's shape, even though it's been brazenly copied, still not only runs against the wind, but also outsmarts it.

Couple that shape with front-wheel drive (which Audi pioneered over half a century ago) and our optional Anti-Lock Braking System (ABS) and the result is a car that handles responsively. Stops precisely. And slips through the wind quietly.

If you're now in the process of deciding which German performance sedan best suits you—the Mercedes, BMW or Audi—we urge you to test drive an Audi 5000S.

And experience for yourself the feeling of running against the wind.

All Audis have a 6-year limited warranty against rust perforation. And a 3-year/50,000-mile limited warranty on virtually everything else. (See your dealer for details.) Audis not only perform and excite. They're designed to endure.

Audi

By Donald Dale Jackson

Alligators are back, breeding like crazy and making a big splash

Twenty years ago they were on the run,
but today gators are so ubiquitous
they are being called a 'public menace'

The problem starts up front, with the face—the cavernous, leering mouth filled with spiky teeth; the cold, predatorial eyes; the knobby, reptilian skin. There's no sense mincing words: we're talking ugly here, nightmare dwellers, creatures from the black lagoon. Show me an alligator and I'll show you somebody truckin' hard the other way.

Early travelers who encountered gators in the lakes and rivers of the South, like the 18th-century naturalist William Bartram, sullied their name with overheated prose. "The horrid noise of their closing jaws, the floods of water and blood rushing out of their mouths, and the clouds of vapor issuing from their wide nostrils," Bartram alleged, "were truly frightful." The Rev. Adiel Sherwood, ministering in Georgia in the 19th century, pronounced the gator simply "the ugliest creature that crawls or walks."

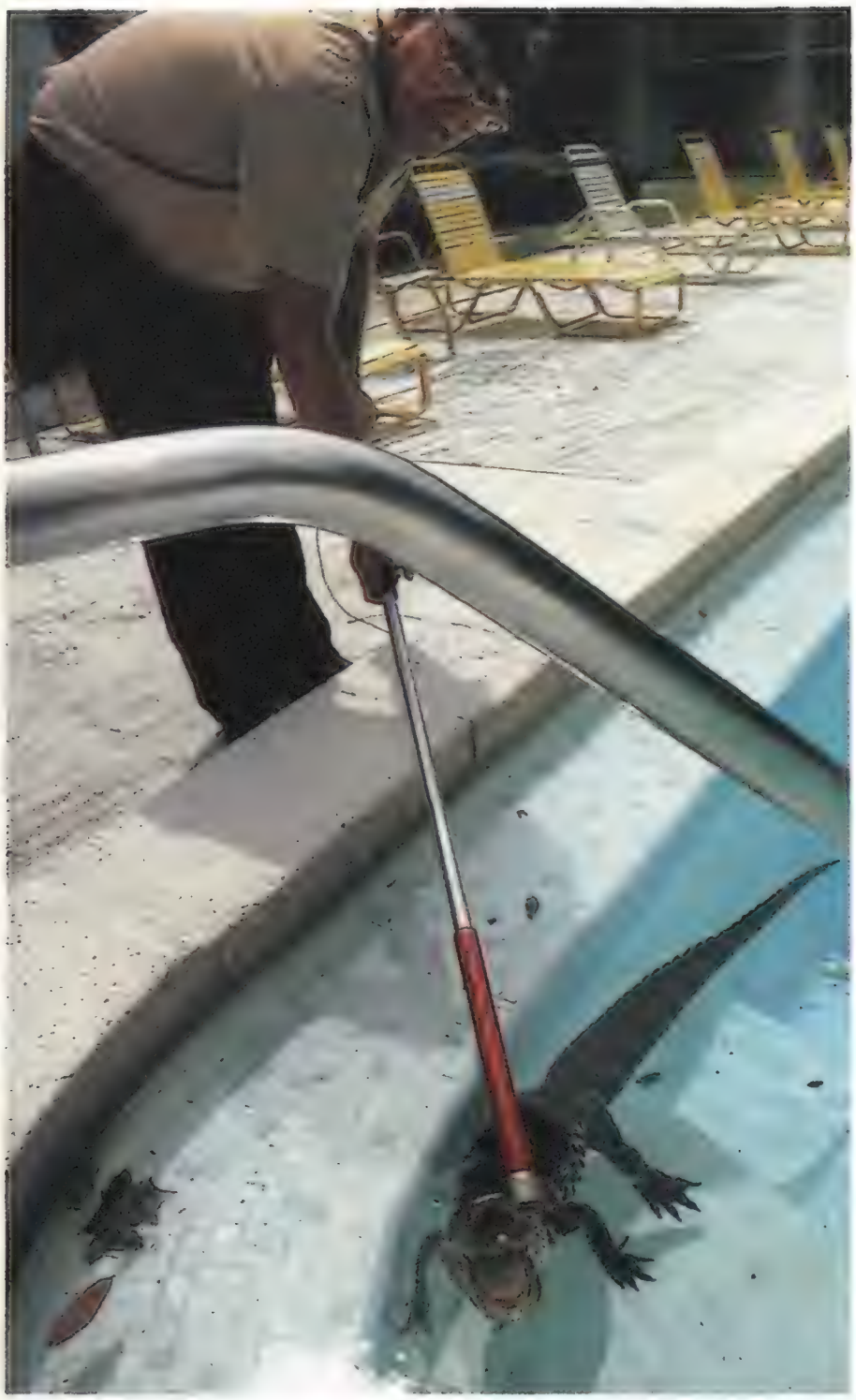
Pioneer nature writers made a mistake repeated by many later observers: they confused the American alligator with the crocodile of southern Africa and Asia, a larger and more aggressive beast with a slightly different anatomy, notably a thinner snout and a pair of lower teeth that remain exposed when the formidable jaws snap shut. The confusion persisted through the years because hardly anyone, save a handful of scientists and a few showmen, developed a close acquaintance with alligators. For a century and more we concentrated instead on chasing, luring, blinding, hooking, snaring, shooting and bashing them for the tough and pliable leather that is derived from their undersides. The trade in alligator hides started just before the Civil War and flourished until hunters began to have trouble finding the animals in the early 1950s. The most popular hunting method was the "bull's-eye" technique which involved spotting gators at night by the orange-red glow of their eyes reflected in a light, and then killing them with a rifle or an ax blow on the head. Hunters also teased them out of their submarine dens with long hooked poles, snatched them with nooselike cables on poles, and fished for them with baited hooks dangled just above the surface of ponds or marshes. The friendless gators were fair game anywhere, anytime, officially condemned as "outlaws" because they gobbled up profitable fur-bearing mammals along with anything else they could reach.

When alligator populations finally began to show the inevitable results of a hundred years of unchecked plunder, the gator was transformed almost overnight from a stealthy villain into a cherished national resource. Florida and Louisiana, the two states where

Frenzied alligators feed on raw meat at a farm in Florida where they are raised for their valuable hides.

The alligator's amazing comeback

Professional trapper leads a "complaint" gator from waterhole on a golf course in Broward County, Florida.



Official gator catcher Columbus White slips noose over four-footer that invaded the pool at a Florida hotel.

gators were always more abundant and most avidly pursued, began protecting them in the early 1960s, and the federal government placed them on its endangered-species list a few years later. The irony was that almost as soon as a blanket of protection settled over alligators it became obvious that they were back, and long before the slow-growing creatures could have rebounded naturally. It seemed that they had not disappeared after all; perhaps they had simply gone into hiding. They were clearly more resilient than anyone had realized. Controlled hunts were established in Louisiana in 1972, in Florida in 1981 and in Texas in 1984, and the species in those states was reclassified on the endangered list to reflect the fact that it was considered biologically secure. Last fall the U.S. Fish and Wildlife Service proposed to similarly reclassify the gator in seven other Southern states. We are beginning, it would appear, to learn something about this remarkable American original.

It's about time. In addition to the .22-caliber abuse they suffered for so long, gators were all but buried under a swampy mound of dread-inspired myths, exaggerations and quasifacts. Roadside reptile zoos, with their man-versus-gator wrestling bouts and their emphasis on the marquee value of ferocity, helped muddy gator waters. Alligators were often depicted as man-eaters (rarely) with the foot speed of a racehorse (no contest) and a life span of 200 to 300 years (who's been counting?). A Florida magazine declared solemnly in the 1920s that a 500-year-old gator could be said to have reached the serenity of middle age. In fact a gator that survives to adulthood has already overcome

At right, another interloper stops traffic on a busy thoroughfare near Fort Lauderdale. Before removing creature, handler usually ties jaws shut, but the strong tail on a large alligator can still present a problem.

long odds, and researchers believe that an average adult goes belly-up, literally, at about 50.

Just about the only shaft of light to penetrate the pre-1960s dark ages of alligator science came in the work of an extraordinary Louisiana gentleman-naturalist named Edward A. (Mr. Ned) McIlhenny, a member of the famed bayou-country clan that has made Tabasco sauce for generations (SMITHSONIAN, May 1984). Mr. Ned was rich enough to grant himself a kind of permanent sabbatical, but he was also tirelessly curious about alligators, conscientious to a fault and as swamp-tough as the creatures he loved to watch. He put everything he learned in a lifetime of gator-viewing into a wonderful book, *The Alligator's Life History*, published in 1935. Mr. Ned spent days watching a mother gator laboriously build a nest from grass and marsh litter and described it in glorious detail. When the mother threatened him as he measured the nest, Mr. Ned deflected her maternal anxiety, he reported, by "clucking to her soothingly." He may have stretched literal truth here and there (as a boy, he wrote, he liked to swim with gators and playfully chuck mud in their faces), but in general his behavioral information was sound and biologists now accept the bulk of it as accurate. "I take him pretty much as gospel," says Kent Vliet (p. 40), a leading present-day gator researcher from Gainesville, Florida.

Mr. Ned once watched two male gators in a roaring, tail-thrashing fight, and when he thought it had gone on long enough he methodically separated the combatants. He killed and measured the longest alligator ever recorded: 19 feet 2 inches. He was also an early, and canny, conservationist. He bought vast tracts of marshland which he deeded to the state after interim management by nonprofit foundations. One of these tracts, the Rockefeller Wildlife Refuge near Grand Chenier, Louisiana, has for years been the headquarters of the most extensive alligator research in the country. Mr. Ned thought of everything.

Modern gator studies portray a complex, fascinating animal so tough and adaptable that it will doubtless survive Man along with every other irritant in its habitat. "They can withstand management," which nowadays means controlled hunting, "and everything else because of their inherent biology," Kent Vliet says. "They are so damned good at doing what they need to do, so long-lived and prolific. The only way we could ever kill them off would be to dry up all the wetlands."

The alligator's range extends from coastal North Carolina on the north through the Gulf States to southeastern Texas and up the Mississippi Valley to southern Arkansas. The animals favor freshwater ponds, lakes, swamps, marshes and slow-moving canals and streams; it is not uncommon for them to frequent swimming pools.

When floating with only its eyes and nostrils out of the water, an alligator resembles a log (see cover). Behind that drowsy guise is a splendidly equipped hunter. Its hearing is probably its long suit, but a gator can also detect prey by sight or smell and by sensory re-

Connecticut writer Donald Dale Jackson has written recently for SMITHSONIAN *about diners, orphan trains and conservation of primates.*

ceptors on the side of its jaws. When a gator submerges, an array of valves and flaps in its nose, throat and ears snap closed to keep water out, and a transparent, eyelidlike membrane protects its eyes while permitting it to see. The unlovely mouth is armed with 70 to 80 conical teeth and a built-in set of replacements for teeth lost in the tugs and tussles of making a living. Gators crunch their food rather than chewing it, with a cruncher that is one of nature's most potent creations: the closing power of the jaw has been measured at up to 1,200 pounds per square inch. Luckily for wrestlers and other gator tormentors, the jaw's opening power is relatively weak; a man of ordinary strength (and extraordinary moxie) can hold the mouth closed with one hand.

If alligators have an organic weakness it is their inability to tolerate extreme temperatures. Their aversion to cold confines them to the balmier subtropical latitudes. They winter quietly in submarine dens known as gator holes, which are vital to the marshlands. During long cold or hot dry spells, the holes are the only source of water. Fish and frogs survive there, are eaten by birds and snakes, and so the food chain continues. A rare extended freeze on Southern waters can cause widespread gatoricide. Since their body heat derives not from their metabolism but from the environment, they spend the summer crawling in and out of the water in quest of thermostatic contentment. Ted Joanen, who is in charge of alligator research at Louisiana's Rockefeller Refuge, reports that they suffer heat damage at 93 degrees F. Crocodiles, denizens of the tropics, can take the heat better.

The gator's list of biological liabilities is otherwise impressively short; nature has dealt the animals a nearly pat hand. In the winter, they can stay under water without breathing for 24 hours. They can handle crowded conditions as long as they have enough to

State alligator managers on an airboat use lights to spot and catch hatchlings in a lake near Gainesville.

Florida biologist Kent Vliet tries to see world from an alligator's viewpoint, but uses pole for protection.

Larger gators, presumably females, may stay nearby and hiss while youngsters are measured, weighed.

After weighing a hatchling, Dennis David will affix tag to foot. Studies provide data on growth, survival.

eat—and they don't need much. "They'll go a year without feeding if they have to," says Vliet. "A 500-pound captive gator can eat 50 pounds of meat in a year and gain weight." Propelled by their churning tail they can swim with what seems—especially when they're headed your way at night—to be the velocity of a PT boat, and they can move with surprising swiftness ashore, as well. Vliet, a man of generous proportions, testifies that an aggravated nine-foot-long mother once stayed a few paces behind, pursuing him for about 45 feet. "I was loping through mud and dead branches and thinking about what would happen if I slipped," he recalls.

Mr. Ned McIlhenny accurately summed up gator taste in food when he described it as "every living thing coming in range of its jaws that flies, walks, swims or crawls that is small enough for it to kill." Large gators crunch away indiscriminately at fish, turtles, water birds, muskrats, nutria, possums, raccoons, snakes, dogs, cats, Coke bottles, spark plugs, shotgun cartridges, rocks, nails and topographic maps. The youngsters favor insects, crustaceans and small fish; large gators sometimes devour infants of their own species. Scientists have long been puzzled by the frequent presence of rocks in gator bellies. Some thought the stones functioned as stabilizing ballast, but current researchers suspect that rocks are gobbled up inadvertently, the way that tins of Vienna sausage and pop bottles are. This view is borne out in the finding by Louisiana biologists that Cajun-country gators have no trouble navigating in a rockless marsh habitat.

A gator on the prowl usually strikes from the side and below. When feeding it throws its head back and rips its meal into chunks that it can swallow, often spinning the prey around in order to gulp it headfirst. Gators will sometimes take fair-sized calves, hogs and deer, and they'll snatch inattentive dogs of all sizes if they stray too close. The stomach of one Florida gator contained a dog tag bearing a poignant message. "My name is Blackie," it said. "Leave me alone and I'll go home."

Some gators are more dangerous than others

Alligators are a threat to humans too, of course, particularly children. Though the number of alligator-caused deaths is low (five in Florida in the past 15 years, none in Louisiana) and attacks are rare, they do occasionally occur. Under what circumstances is still unclear; apparently, some alligators are more dangerous than others.

We have a slightly better idea of when and where gators attack: they are more likely to do so in late afternoon and early evening in the summer, when they are out hunting, and in places where people foolishly

fed them, thus dispelling their natural wariness. Biologists and hunters agree that alligators are to some degree daunted by the size of a potential victim. An adult human is probably too big, especially when standing on land, but the dread of a mauling, horrible death in the jaws of a giant gator is a primal, atavistic fear that neither statistics nor scientific logic can banish. The experts advise common-sense caution: don't swim in any known or potential gator habitat, and keep a sharp eye on the kids.

The gator's bulk alone is intimidating. Males often attain a length of 13 feet and weigh 600 pounds. Lolling around indolently in a gator zoo they can balloon to 900. Females are smaller, rarely more than eight or nine feet long. One of the most astonishing facts about gator biology is the difference in size between an eight- or nine-inch hatchling, which weighs less than three ounces, and a full-grown adult. It may have been the unimposing sight of the little ones that inspired the species' name: early Spanish explorers dubbed them "*el lagarto*" (lizard), which Colonial Americans converted to alligator.

Young gators grow roughly a foot a year for the first five years, but most of them don't make it to adolescence. Babies are preyed upon by herons, snakes, turtles, raccoons, fish and senior gators, among other neighbors in their wetlands habitat. Those that manage to navigate the obstacle course to adulthood get their revenge later, but Allan Woodward of Florida's Game and Fresh Water Fish Commission reports that less than nine percent of the newborns survive their first two and a half years.

Gators signal the onset of the two-month springtime breeding season with deep-throated bellows that sound like a flotilla of boats revving ten-horsepower motors. The rumbling bellows are the male's way of announcing his readiness and whereabouts, Ted Joanen explains. An interested female responds with a roar of her own as she moves from the shoreline shallows to the deeper water cruised by the male. The surprisingly tender courtship begins with soft nose bumps and mutual neck massaging. According to Kent Vliet, this romantic interlude, accompanied by low-frequency vibrations, lasts a few days. The male then mounts the female, listing slightly to one side, and the good times roll. A male spurned during the preliminaries can get testy. "I've seen them bite off part of the female's tail or throw her around in frustration," Joanen says.

Researchers have found no evidence that alligators recognize each other individually, and males and females go their separate ways following their brief and boisterous liaisons. A month after mating, the female begins building a nest—usually on dry ground—that resembles a stunted haystack. She patiently rips up plants and other vegetation and piles it in layers until she's satisfied, making frequent tours of inspection. She digs a shallow hole on top of the nest, lays about 40 eggs in it and carefully covers them up. Sixty-five days later the babies crack the shells. The mother may tear off the top layer of the nest, sometimes even carrying the young to the water in her mouth.

Joanen made the intriguing discovery that temperature during the first two or three weeks determines the hatchlings' sex: an average reading of 86 degrees F or

Opposite: Puffed-up gator at Okefenokee Swamp bares its teeth as a warning for intruder to back off.

Above: Blending into marsh grass, hatchlings show how well black-and-yellow camouflage works.

less produces an all-female clutch; at 93 or above all the young are males. Anything in between produces a mixed litter. ("My memory device is, think 'cold-hearted females,' " a Florida biologist says.) Some mother gators, like the one that chased Kent Vliet, belligerently defend their nests against intruders, but others don't. Adult gators of both sexes will usually respond with a rush to the snuffling "yurk" that a baby emits in distress—a trait that has often been their undoing, since hunters imitate the call.

Territoriality in gators, scientists believe, is a sometime thing, a phenomenon recognizable among males mainly in the breeding season. "And it doesn't involve a given piece of real estate," biologist Allan Woodward says. "Wherever he goes, that's his territory." Others trespass at their peril. A male gator tends to be a rover. One radio-monitored creature in Louisiana covered 33 miles as the crow flies during a year of observation. At night gators often creep over land for several miles between ponds, detouring around man-made barriers like houses and fences. Gator social proclivities are still a mystery, but they clearly like to bask together on sunny banks, sometimes piling atop one another like logs after a flood.

With a brain no larger than a poker chip an alligator is no mental marvel, but it's not a total bimbo either. "They're dumb but they're smart," says Columbus White, a 60-year-old licensed hunter from Lochloosa, Florida, who these days kills alligators for the state. "You wound one with a harpoon and it'll be years before anyone gets that close to him again." "Anything food-connected they'll pick up on quick," Vliet adds. "At the St. Augustine Alligator Farm they hear the truck bringing their food when it gears down on the road outside, and they immediately move to the feeding area." They seem to have internal direction finders as well. "We had one at our place that we called Old Pete," says John Paul Crain, a 72-year-old lifelong gator-chaser from Louisiana. "He disappeared for two years one time and found his way back. They'll go 15, 20 miles and turn up back home, oh yes. A dog couldn't do that. Except Lassie, maybe."

The alligator's wiliest achievement, especially in recent years, is its ability to coexist in sometimes uncomfortable proximity with civilization. Dredge a ditch for a marsh road or build a drainage canal and gators have a new home. Their protectors in the environmental community have made fish-and-game wardens skittish about permitting unrestricted hunting. Scientists find them fascinating, and tourists like to gaze at them from rickety walkways. Their numbers are soaring—there are about 750,000 of them in Louisiana and a million-plus in Florida—but hunters are allowed to take no more than about 25,000 a year. Alligator managers like Dennis David and Lindsey Hord of the Florida Game and Fresh Water Fish Commission, who recently took me on a nocturnal airboat ramble over a gator-rich lake, spend their time tagging, counting and studying gators and regulating what hunters like to call the "harvest." But sometimes it's hard to tell which species is managing which.

"Grab him, Dennis!" Lindsey shouted from his elevated chair amidships. Dennis, short and bearded, snatched a foot-long baby gator with six-foot-long

Young gator's eye, reproduced at about twice life size, reflects light with a special layer of tapetum cells in the retina, causing a telltale shine that serves as a dead giveaway for hunters out spotting at night.

tongs. He passed it back to Lindsey who measured it, clamped an identification tag between the gator's webbed toes and weighed it, the gator dangling in a rubber harness much like an ugly puppet. They were recapturing and tagging previously tagged young gators to study their growth rate; they were also censusing the population for hunting purposes. Lindsey held the youngster carefully. "Even when they're small you want them to let go when they bite," he said dryly. "This one's about as scared as it's gonna get and live."

Lindsey parked the boat on a mudbank and led us through thick brush to a pond. "Look out there," he said, pointing his flashlight about 50 yards off. Twenty pairs of orange-red eyes glowed on the surface like harnessed teams of fireflies. A sound like distant thunder—a bellow—came from somewhere in midpond. "This is where the big ones hang out," Lindsey said. He and Dennis broke into a duet of high-pitched nasal grunts. One pair of eyes barreled toward us like an 18-wheeler on the interstate. The big gator crawled onto the bank about ten feet below us. "Far enough! I didn't mean it!" Lindsey protested. The gator stared at us balefully for a minute, then retreated. "He knows he's bad, he's all blown up," Lindsey said referring to the alligator's propensity to inflate itself in response to danger (p. 42).

We returned to the boat. "I admire their toughness," Dennis said. "They can have arms or legs or part of their tail chewed off and they're still truckin'. A mammal would go into shock and die." When we quit soon after midnight the count was 40 gators caught and tagged, perhaps another 50 sighted. Lindsey smiled. "Another good night with Ole Redeye," he said.

As Florida's alligator management coordinator, Dennis David referees the various conflicts between Ole Redeye and Floridians. He administers the tightly controlled hunts which permit a limited number of gators to be taken from lakes where they are known to be abundant. Licensed hunters make a 70-percent profit on the sale of the hides at state-supervised auctions, with the state getting the other 30. Game managers in Florida and Louisiana believe that the policy they call "value-added conservation"—making gators pay their way, in effect, by bringing in revenue—pro-

All you asked was to go faster and farther. With more power. And less fuel.

In many of the finest American cars, Bosch fuel injection components help deliver precisely the amount of fuel needed for any driving condition.

And those American cars are going faster and farther. Producing up to 20 percent more horsepower. Using less fuel. And reducing exhaust emissions.

Power as you need it.

Bosch multi-point systems inject fuel right at the individual cylinders.

A microcomputer reads thousands of engine operations and driving conditions every second, and dictates the most efficient mix.

So Bosch fuel injection not only gives you more power when you need it. It can boost your mileage by as much as 15 percent.

Traveling in the best of companies.

Bosch fuel injection arrived in the U.S. in imported cars over 30 years ago. It's since evolved from a curiosity to a high-technology must for today's best performing machines.

Today, every U.S. manufacturer uses Bosch fuel injection systems or components.

Virtually every European model sold in the U.S. is equipped with Bosch fuel injection.

And every fuel-injected Japanese model uses systems or components produced under Bosch license or using Bosch patents.

Bosch breaks ground.

Sophisticated problem solving is what Bosch is all about.

We supply every major U.S. and European automaker with an array of advanced products, from high-performance spark plugs to anti-lock braking systems. But our expertise isn't limited to automotive.

We're a leading manufacturer of high technology products, such as Bosch factory automation systems, packaging machinery, medical equipment, home appliances, power tools, TV studio and video graphics equipment, and Blaupunkt automotive sound systems.

In fact, we've pioneered literally thousands of the world's most sophisticated electronic and electromechanical advances. As a result, we're an international corporation with manufacturing facilities in 18 countries. And with sales and service in 139.

But more important are 147,000 Bosch people—9,000 in R&D alone—who are capable of finding the right answer to the toughest challenges. Including yours.

BOSCH

Bringing high technology down to earth.

vides a practical motive for protecting the resource. "We did a lot of soul-searching and decided that this way we could combine an economic incentive with the esthetic and ecological value of gator conservation," David says. The experts contend that legalized hunting helps reduce poaching, which persists nowadays at a relatively low level solely for the gators' meat. Louisianans capsule the value-added principle in a slogan: "If you want to save an alligator, buy a handbag."

Wayne King, a respected Florida conservationist who now works for the International Union for Conservation of Nature and Natural Resources, supports the hunting program but points out that the "return does not match the money a landowner would get from development. An appreciation for the animal has to be built into the policy." The real threat, King adds, is a relentlessly spiraling human population and the resultant pressures to drain marshes, build more condos and houses and otherwise ravage gator habitat.

But veteran hunters in Florida and Louisiana say that the resilient gators are as numerous as they've been anytime in the past 50 years. "Although we estimate a million here," says Tommy Hines of the Florida Game and Fresh Water Fish Commission, "we could just as well make it two million. I'd rather just say that there are a hell of a lot of gators out there."

With human and alligator populations apparently rising in parallel curves, the potential for collisions increases. Florida and Louisiana already have "nuisance-alligator control" programs, though it's difficult to think of anything that burly as a mere "nuisance." Citizen complaints—a gator in the yard or by the boat dock, a dog snatched from the water's edge—are referred to a contract hunter who usually kills the offending animal.

In Florida the number of complaints increased from an annual average of 4,627 between 1978 and 1981 to 6,450 in the following four years. Twenty-four attacks on people, two of them fatal, took place there in the past four years. Columbus White responds to nuisance complaints for the state. White is shy one finger on his left hand due to an encounter with a disgruntled gator. ("You ain't going to believe this, but he *run* me ten feet.") He has chased gators on airport runways and plucked them from sewage ponds and swimming pools ("One or two every year"). Sometimes, he says, people cry gator first and look later. "This one feller said he heard about ten at his place. I went there and listened. Then I said, 'Sir, I hate to disheart you but them's frogs.' Another time a lady said she heard 'em hollerin' and I said what did they sound like. 'Just like a peacock,' she said. It warn't no gator. It was a little bird." White says that the majority of the complaints are legitimate and that most of the time he gets the troublemaker. He harpoons them or lassos them cowboy-style, then "unjoints" them—slashing their neck with a hatchet.

Vliet endorses the nuisance program as "a way that people can live with alligators," but King sees a need

Cruising a man-made lake at sunset, a flotilla of gators closes in on an observer wielding a powerful light.

for more wildlife education. "Whenever there's an incident you'll hear the cry to wipe them all out," he says. "There's been no effort to teach people about them." John Rimes, a cattle rancher who has lost four dogs and several calves to gators, speaks for the segment of the populace that can do without them. "You have to say, 'Mother, may I' six times before the state will come after one," he grumbles. "They're breeding like crazy."

Rimes is right. They *are* breeding like crazy, just as they and their crocodilian ancestors have been doing for around 200 million years now. They can obviously live with us or without us, and it looks like we're finally learning how to live with them. It's equally apparent, however, that we're never going to overcome the dread that they inspire. I overheard a small boy at the St. Augustine gator farm ask his father what alligators eat. "People," he replied. "Children."

Handel, Water Music The English Concert/Pinnock. "Quite the best performance...now on the market."—Gramophone Archiv *DIGITAL* 115306

Dvořák, Symphony No. 9 (New World) Chicago Symphony Orchestra/Solti. "The playing is superlatively good."—Gramophone London *DIGITAL* 115168

Perlman: Mozart, Violin Concertos Nos. 3 & 5 Vienna Philharmonic/Levine. "Radiantly sumptuous."—High Fidelity DG *DIGITAL* 115146

America, The Dream Goes On The Boston Pops/Williams. Title song, *America, Battle Hymn Of The Republic,* more. Philips *DIGITAL* 115134

Handel, Messiah (Highlights) Musica Sacra/Westenburg. *Hallelujah Chorus, I Know That My Redeemer Liveth,* more. RCA *DIGITAL* 153586

Rubinstein: Rachmaninoff, Piano Concerto No. 2; Rhapsody On A Theme Of Paganini Chicago Symphony/Reiner. RCA 170232

Ravel, Daphnis et Chloé (Complete) Montreal Symphony/Dutoit. "An absolute dream performance."—Stereo Review London *DIGITAL* 115520

Brahms, Cello Sonatas Yo-Yo Ma, cello; Emanuel Ax, piano. 1985 Grammy Award Winner, Best Chamber Music Performance! RCA *DIGITAL* 154044

Pavarotti: Passione Title song, *La Palummella,* 10 more. "A sumptuous festival of Neapolitan plums."—Opera News London *DIGITAL* 115441

Mozart, Requiem Leipzig Radio Choir; Dresden State Orchestra/Schreier. "Exceptionally satisfying."—High Fidelity Philips *DIGITAL* 115039

Galway: Clair De Lune (Music Of Debussy) With Marisa Robles, harp. Sonata for Flute, Viola & Harp; Rêverie; more. RCA *DIGITAL* 150499

Rimsky-Korsakov, Scheherazade Vienna Philharmonic Orchestra/Previn. "A fresh and spacious reading."—Gramophone Philips *DIGITAL* 115415

Romantic Organ Music Peter Hurford plays Widor, Vierne, Alain, Franck, Karg-Elert, Brahms, Mendelssohn & Reger. Argo *DIGITAL* 115221

The Canadian Brass: High, Bright, Light & Clear Air On The G String, Masterpiece Theatre Theme, other Baroque gems. RCA *DIGITAL* 144529

Richard Stoltzman: Begin Sweet World Title song, *Amazing Grace, Clouds, Abide With Me/Blue Monk, Morning Song,* more. RCA *DIGITAL* 150414

Horowitz In London Recorded live! Schumann, Kinderscenen; Chopin, Polonaise-Fantaisie & Ballade No. 1; more. RCA *DIGITAL* 162507

Orff, Carmina Burana Hendricks, Aler, Hagegård. London Symphony Chorus & Orchestra conducted by Eduardo Mata. RCA *DIGITAL* 144503

Pops In Space John Williams leads The Boston Pops in music from Star Wars, Close Encounters, Superman, more. Philips *DIGITAL* 105392

Mozart, The Piano Quartets Beaux Arts Trio; Bruno Giuranna, viola. "Absolutely indispensable."—Stereo Review Philips *DIGITAL* 115271

Pachelbel, Canon in D Also includes other works by Pachelbel & Fasch. Maurice André, trumpet; Paillard Chamber Orchestra. RCA 133877

Wagner, Orchestral Highlights From The Ring Vienna Philharmonic/Solti. Ride Of The Valkyries, Magic Fire Music, more. London *DIGITAL* 115426

Julian Bream: Music Of Spain, Vol. 5 Albéniz & Granados on guitar. "Electrifying...A treasurable disc."—Gramophone RCA *DIGITAL* 114746

Gershwin, Rhapsody In Blue; An American In Paris; Concerto Pittsburgh Symphony/Previn (pianist & conductor). Philips *DIGITAL* 115437

Galway Plays Khachaturian Flute Concerto; Sabre Dance; Masquerade: Waltz; Adagio Of Spartacus And Phrygia. RCA *DIGITAL* 160162

Pavarotti: Mamma With Henry Mancini: Title song, *Non ti scordar di me, Musica proibita, Vieni sul mar,* 12 more. London *DIGITAL* 115310

Mahler, Symphony No. 4 Kiri te Kanawa, soprano. Sir Georg Solti conducts the Chicago Symphony Orchestra. London *DIGITAL* 115092

Rudolf Serkin: Mozart, Piano Concertos Nos. 12 & 20 "He makes every phrase glow with life."—Stereo Review DG *DIGITAL* 115062

Vivaldi, The Four Seasons The English Concert/Pinnock. "The finest recording of [it] I've heard."—High Fidelity Archiv *DIGITAL* 115356

Reich, Variations For Orchestra; Adams, Shaker Loops San Francisco Symphony Orchestra led by Edo de Waart. Philips *DIGITAL* 115479

Sousa, Stars And Stripes Forever Philip Jones Ensemble. Plus *Semper Fidelis, El Capitan, Washington Post,* 11 more. London *DIGITAL* 115051

The International Preview Society

3 COMPACT DISCS, RECORDS OR CASSETTES for just $1.00

plus shipping and handling with Club membership

with No Obligation to Buy Anything...*Ever!*

Bizet, Carmen (Highlights From The Film Soundtrack) Julia Migenes-Johnson & Plácido Domingo; Maazel, conductor. Erato *DIGITAL* 154105

Schubert, Trout Quintet; Mozart, Eine kleine Nachtmusik Emanuel Ax, piano; Julius Levine, bass; Guarneri Quartet. RCA *DIGITAL* 154371

Tchaikovsky, Symphony No. 6 (Pathétique) Chicago Sym./Levine. "A sound that dazzles and sings."—Milwaukee Journal RCA *DIGITAL* 153939

Mozart, Posthorn Serenade; 2 Marches Academy of St. Martin/Marriner. "Gracious, warm musicmaking."—N.Y. Times Philips *DIGITAL* 115151

Alicia de Larrocha: Falla, Nights In The Gardens Of Spain Also includes rhapsodies by Albéniz & Turina. London *DIGITAL* 115410

Tomita: The Mind Of The Universe (Live At Linz, 1984) Ode To Joy, Also Sprach Zarathustra (opening), Liebestod, more. RCA 173829

Swing, Swing, Swing The Boston Pops/Williams. Title song, *Satin Doll, Moonlight Serenade, In The Mood*, 10 more. Philips *DIGITAL* 115540

Gregorian Chant Schola of the Hofburgkapelle, Vienna. 10 Propers from Graduale Romanum; more. Hauntingly serene. Philips *DIGITAL* 115434

Artur Rubinstein: Chopin, 14 Waltzes "[His] playing is relaxed, assured, and wonderfully controlled."—American Record Guide RCA 101987

Mozart, Symphonies Nos. 40 in G Minor & 41 in C (Jupiter) James Levine conducts the Chicago Symphony Orchestra. RCA *DIGITAL* 104810

Kiri te Kanawa: Blue Skies With Nelson Riddle: Title song, *Speak Low, How High The Moon, So In Love*, 8 more. London *DIGITAL* 115035

The Canadian Brass: The Village Band A Stephen Foster Treasury, A Sousa Collection, Flight Of The Bumblebee, more. RCA *DIGITAL* 134440

Bach, Organ Works Daniel Chorzempa plays the Toccata & Fugue in D Minor; the Prelude, Largo & Fugue in C; more. Philips *DIGITAL* 115193

Galway & Mancini: In The Pink *The Pink Panther, Breakfast At Tiffany's, Pennywhistle Jig, Two For The Road*, more. RCA *DIGITAL* 151758

Vaughan Williams, Fantasia On A Theme By Thomas Tallis; Fantasia On Greensleeves; more Academy of St. Martin/Marriner. Argo 105459

Debussy, La Mer; Nocturnes Boston Symphony Orchestra/Davis. "The BSO is in tip-top form throughout."—Ovation Philips *DIGITAL* 115068

Sunday In The Park With George Original cast album with Bernadette Peters & Mandy Patinkin. Grammy Award Winner! RCA *DIGITAL* 154014

Ashkenazy Plays Ravel Gaspard de la nuit; Valses nobles et sentimentales; Pavane pour une infante défunte. London *DIGITAL* 115101

Prokofiev, Symphony No. 5 Saint Louis Symphony Orchestra/Slatkin. "Outstanding."—Opus Double Grammy Winner! RCA *DIGITAL* 154580

Marilyn Horne: Beautiful Dreamer Plus *God Bless America, Shenandoah, You're A Grand Old Flag, Camptown Races*, more. London *DIGITAL* 125359

Values up to $47.94

This remarkable $1 offer is being made to introduce you to an outstanding classical music membership—with never any obligation to buy.

You'll find hundreds of outstanding albums in each issue of the Society's magazine, which will be sent to you every 4 weeks. You will also receive 6 special sale issues, giving you 19 opportunities a year to shop for fine music at home. But there is no obligation to accept any offering at any time.

You choose only the music you want!
If you'd like to accept the Main Selection, you need not do a thing. It will be sent automatically. If you'd prefer an alternate selection or none at all, just mail back the Notification Card by the specified date. You'll always have at least 10 days to decide.

Substantial savings with our half-price bonus plan.
For every regular purchase you do make, you may choose a bonus album for only half of the members' club price! A shipping/handling charge is added to each shipment.

3 Compact discs or records or cassettes for just $1!
Begin your membership now by choosing any 3 albums shown here for just $1 plus shipping and handling. Send no money now. We want you to judge for yourself before you decide to buy. If not delighted, return your 3 albums at the end of 10 days without obligation.

The International Preview Society

P.O. Box 91406 • Indianapolis, IN 46291

☐ **YES!** Please accept my membership in The International Preview Society and send me, for 10 days' FREE examination, the 3 albums I have indicated below. I may return them after 10 days and owe nothing, or keep them and pay only $1 plus shipping & handling.

Please send all selections on: ☐ **Compact Disc** ☐ **Cassette** ☐ **Record**

Write Selection Numbers Here:

☐ Mr.
☐ Mrs.
☐ Miss First Name Initial Last Name (PLEASE PRINT)

Address_____ Apt._____

City_____ State_____ Zip_____

Telephone (_____) _____
Area Code

NOTE: Members who select compact discs will be serviced by the Compact Disc Club. Full membership details will follow with the same 10-day, no-obligation, no-minimum purchase privilege.

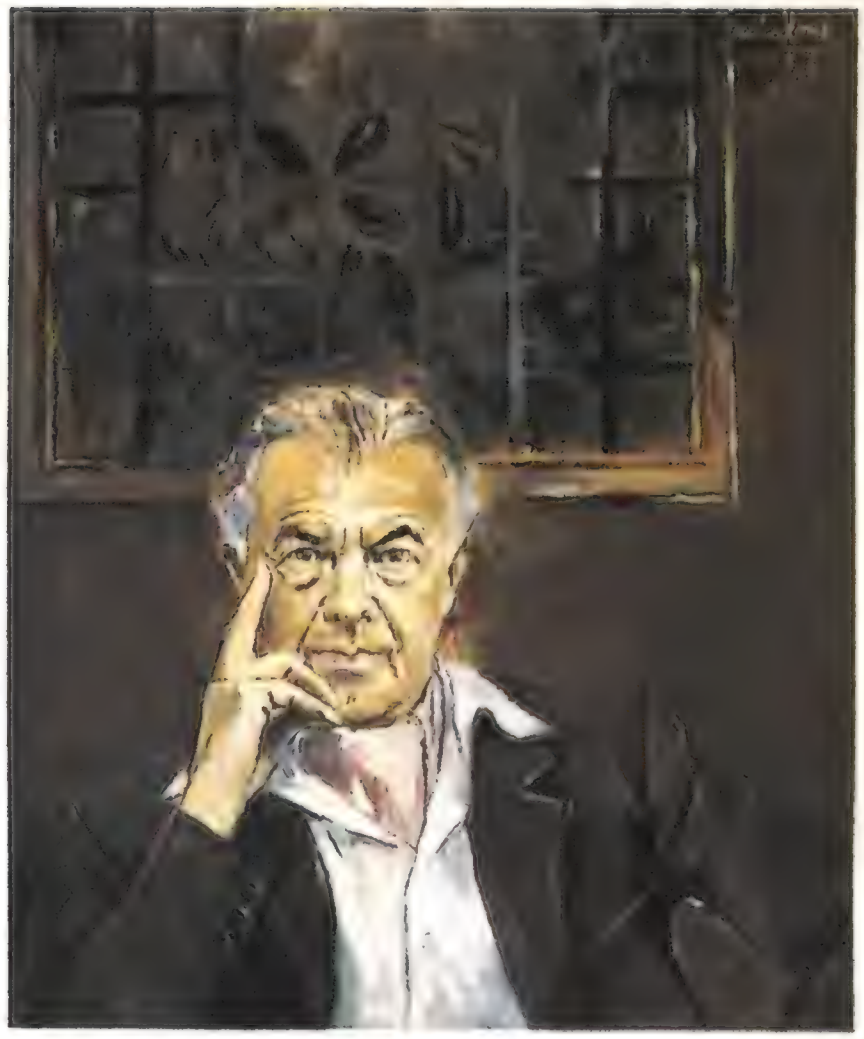
Limited to new members, continental USA only; one membership per family. We reserve the right to request additional information or reject any application. Local taxes, if any, will be added.

WAS95 (BF) BWH (PJ)

By Helen Dudar

An art-filled villa finds a special setting in Texas

Packed up lock, stock and barrel, the home of Wendy and Emery Reves now graces the Dallas Museum of Art



Emery Reves, in 1966 portrait by artist Graham Sutherland, shows determination that was hallmark.

Emery Reves, a Hungarian-born British citizen who lived in France and Switzerland, was a smallish, compactly built man at home in nine languages and at ease in the corridors of power. He loved Impressionist art and had the means to buy some distinguished examples. Endowed with a compelling intelligence, Reves fashioned a unique newspaper-syndication service for statesmen, wrote a celebrated book on world federalism and, in the "wilderness years" before World War II, provided a major European platform for Winston Churchill's anti-Hitler views. Still, when he died in Montreux shortly before his 77th birthday, his name was probably familiar to no more than a few thousand people and his passing escaped the notice of most of the world's obituary pages.

The treasures he left behind included 41 paintings, 37 works on paper, 13 sculptures and more than 1,300 decorative objects—period furniture, masterwork textiles, ancient frames, antique Chinese porcelain, old silver and glassware, Renaissance ironwork. There was also Villa La Pausa in the South of France, where Churchill had been famously coddled through six years of holiday visits. And, crucially, there was a widow of formidable charm and will. Wendy Russell Reves says she went home from the hospital the night of his death on September 5, 1981, and offered a vow to her husband's departed spirit. "I said, 'Poochie, you never did get the acclaim that you should have had in your metier. I can't give you that, but I can make you the greatest collector of this century.' "

"It's all fantasy," says Wendy Reves of her new bedroom in Villa La Pausa in the South of France.

We are accustomed to statements of this kind in romantic fiction, but then Wendy Reves seems to have stepped straight out of one of those big, compulsively readable novels we save for vacation reading. A Texas beauty, she is 70 now and a commanding figure: blunt, high-spirited, with whirlpool energy and expensive skin, a former model's flair for dressing and an undisguised interest in herself.

Even in her native state, a land of outsize personalities, she is an exotic, a theatrical creature for whom any public occasion is apt to become a star turn. Only Wendy Reves, leading a party through a museum display of the treasures of her marriage, could so disarmingly assume her burden of credit for it: "I would like for all of you to have known my husband who was so fantastic. A man who could have a widow do what I'm doing for him, he has to be a special man."

If Emery Reves was not the greatest collector of this century—there is, after all, serious competition—he was certainly a successful one who bought well, albeit never with the fever of the addicted acquirer. Four

Emery, Wendy enjoy outing in French garden in 1949. On rise in her career, she was on assignment abroad.

years after his death and after a cliff-hanging saga of delays, the Wendy and Emery Reves Collection opened in late 1985 at the Dallas Museum of Art.

The collection went into a wing built for it a few years earlier when the DMA's new home was under construction and at a time when the transfer from France often seemed in peril. The space includes galleries of important drawings, fine rugs and Churchill memorabilia, as well as six fully furnished rooms approximating the arrangement at Villa La Pausa.

"Pausaland," as Churchill fondly called it, sits on a landscaped hilltop in Roquebrune with a commanding view of the Mediterranean coastline—Monaco to the west and Menton to the east. In its glory days, the place was a beacon for the famous: German Chancellor Konrad Adenauer came to tea; the Duke of Windsor stopped by for a visit; Noel Coward once sang after dinner; Greta Garbo had a birthday fete on the premises. Even with the great art and best pieces gone, the house is still a wonder, refurnished with the dramatically artful carelessness—shawls thrown over chairs, nibbles set out in precious porcelain dishes—that is the hallmark of the considerable Reves talent for embellishing interiors.

The announcement of the gift, and later its installation, were occasions for applause and carping. On the one hand, the Dallas Museum now owned a collection which was conservatively valued at $30 million and had doubled the worth of its holdings. On the other hand, the museum world is always anguishing over the issue of whether an institution should cave in to donor conditions for special space. Neither Harry Parker, the DMA director, nor the museum leadership that helped raise $6 million to build the Decorative Arts wing, spent much time worrying the subject.

Suddenly a museum that had not owned a single Renoir was in possession of eight early ones. It now could hang, among other splendors, a ravishing Cézanne watercolor and two of his oils, a masterful van Gogh drawing, a beautiful Toulouse-Lautrec pastel nude, a luminous Vuillard summer scene, a prize Vlaminck and one of Redon's mysterious arrangements of flowers in a vase (p. 59).

And it had those six interiors—entry, great hall, library, dining room, bedroom, salon—finally assembled in three weeks under Wendy Reves' supervision and with her finicky attention to detail, right down to the antique ladies' shoes at the foot of an extraordinary bed. She enjoys excess and she is amused by her pleasure in it. The dining room's baronial table is typically crowded with antique tableware. Once, when she was

Writer Helen Dudar lives in Manhattan. Her most recent article in SMITHSONIAN *dealt with the art scene in Los Angeles (June 1986).*

giving a lunch for President René Coty of France, she asked a neighbor, Edward Molyneux, the great couturier, to inspect the settings. He came, looked and said, "You know something, Wendy? Just because you have it doesn't mean you have to put it out."

The museum rooms do not exactly reproduce the originals. But she aimed for flavor and style and achieved them. Except for the fact that the barrier in each room often leaves the viewer too far from important paintings, only an unreformable snob would complain about the installation. It is rich and interesting and, in Dallas, it is unique. There is no public place like it in or around the city, no stately home, no summer chateau where the less privileged citizenry can see rare, beautiful things arranged for everyday life.

The essentials of the Reves wing were moved out of the Villa La Pausa in September 1983, in a massive pack-up that consumed three weeks. Harry Parker, who had been back and forth seven times through two years of negotiations, came to help. He remembers that as he set out on yet another trip to France, he speculated that in this final moment, Mrs. Reves might find the event too painful to endure. "Forget it," he imagined her saying, "I don't want to do it." Only when the first of five giant vans pulled up the great winding drive did Parker fully understand that Wendy Reves "had a real sense of mission about this." She saw her possessions leave her house with something approaching joy in a job well done.

In the company of giants

The Reves bequest is a memorial to her husband, and more—a monument to a marriage, a celebration of times that will not come again. A few weeks before the Dallas opening, Mrs. Reves was showing a visitor through Villa La Pausa and opened the door to the amazing sight of her bedroom (p. 50). Refurbished and almost as lavish as the original, it called to mind one of those impossibly opulent sets in vintage Hollywood movies. "It's all fantasy," she said. It could as accurately be said that the entire house was fantasy become reality for two people whose beginnings had promised a great deal less than an art-filled villa and the company of some of the giants of our century.

She was Wyn-Nelle Russell, daughter of a broken marriage, a child of poor, rural Texas who grew up in other people's houses and played with bits of colored glass in lieu of toys. Married for the first time at 17, a mother at 18, a divorcée a few years after that, she came to New York in her early 20s to conquer the modeling world and succeeded brilliantly.

He was Emery Revesz, born into a fairly well-off family whose fortunes declined in the post-World War I period, leaving hardly more than the means to buy a

Emery and frequent guest Winston Churchill, with daughter Sarah, relax on villa terrace in the late '50s.

Gotham Hosiery publicity still, 1950, suggests charm of Wendy, who had by then won bachelor Emery Reves.

Winston, ensconced in "Pausaland," goes over proofs of his World War II history series in the library.

The villa's library, which was Churchill's favorite room, is seen here in its Dallas reincarnation.

promising only son a first-class education. He was a Jew and twice in his life would abandon homes and possessions a few steps ahead of the Nazis. Young Reves (the "z" vanished when he became a naturalized British citizen) earned a doctorate in political economy at the University of Zurich, settled in Berlin, did some ghostwriting and then, without an iota of experience, became a free-lance journalist.

In 1930, at 26, he fled Berlin for Paris, where he had launched Cooperation Press Service, an agency that disseminated the ideas of some of the major European political figures of the day. With apparent ease, Reves found his way to such men as Clement Attlee, Anthony Eden, Bertrand Russell, Paul Reynaud and Eduard Beneš. In time, he had contracts with 120 authors whose pieces would be translated into three languages for sale to 400 newspapers in 70 countries. The venture, a profitable business, also had an ideological cast. Reves' writers largely represented the non-Fascist world vainly trying to halt the metastasizing tyranny of Hitler's force.

Two of Reves' clients urged his services on Winston Churchill, and in 1937 they began a relationship which was to endure for 25 years. In the time of Churchill's languishing political fortune, Reves reintroduced his voice to the world, using pieces almost weekly, occasionally to provide swift replies to Hitler's speeches.

When war came and France fell in 1940, Reves made his way out of the country to Britain. Some months later, he embarked for America, prepared to act as England's propagandist. At the war's end, Churchill would begin writing his six-volume history; Reves handled the sales for foreign-language publication.

On his own in America, Reves had written *A Democratic Manifesto*, an attack on nationalism as a cause of war, and in 1945 *The Anatomy of Peace*, an argument for world federation. The book had a remarkable history. It was publicly praised by such eminent figures as Thomas Mann and Senator J. William Fulbright, men who worried about the newly developed nuclear weaponry and agreed that a form of international control was vital. When Albert Einstein added his voice to the book's supporters, it soared onto the best-seller lists.

Suddenly, Reves was a famous author, a status suitable for the encountering of a famous model. The raw, ambitious country girl from Texas had reinvented herself. She had come to New York poorly dressed and crudely peroxided, and had learned the basics of big-city chic. In less than a year, she was in her trade's equivalent of heaven: she became a John Robert Powers model.

The newly renamed Wendy Russell made spectacular money for the day, $25 an hour, five times the standard rate. A ravishing young woman, she was also fun—warm, sunny and bubbly—and in hardly any time at all she was part of café society's nightlife. Her name turned up regularly in the best gossip columns; the actor Franchot Tone was a pal; another actor, Burgess Meredith, was briefly a fiancé; the bandman Paul Baron was, for a few years, her second husband.

Emery and Wendy were first casually introduced by a mutual acquaintance. He called to invite her to dinner; she suggested cocktails at her penthouse apartment so that he could meet her mother—in her view a more suitable companion for him. "I am not interested in your mother, but in you," he announced. Two years went by and Leonora Corbett, the actress, a good friend of both, set out to make what she saw as an ideal match. There was a small dinner party, and the man Wendy Russell had dismissed in her mind as a dull "old professor" turned out to be strong, charming and exceptionally brainy. Thus began a relationship in which Emery Reves was to be not only friend and companion but, with his fine European education and broad cultural experience, a sophisticated tutor as well. "I am a production of Emery Reves," his widow says with a good-natured laugh.

Their life together began in 1949 in Europe, where Reves was now spending most of his time and where she first came on modeling assignments. He had publishing offices in Paris and London and, significantly, he had invested in German "penny stocks" which, as the shattered German industry was revived, enhanced his wealth. The two would not marry for 15 years. Somewhat in advance of the customs of the day, Wendy Russell was in no hurry for a formal union.

"I thought, 'This is not a man at 45 to get married. You try to tie him down, he'll escape.' I didn't want him to escape. I didn't need his money and I didn't mind not being Mrs. Somebody." At chic Paris dinner parties she would interrupt the hostess introducing her as Reves' spouse. " 'Oh, no, I'm not Mrs. Reves. I'm just living in sin.' That would stop them from gossiping."

A vagabond life in luxury hotels

To Emery Reves, she was "Pucy," a Hungarian endearment. Wendy Russell, corrupting the word slightly, called him "Poochie." Smart and determined, she learned her way into speech appropriate to her new life-style. She became fluent in French; whatever remained of a Marshall, Texas, twang was transformed into a deracinated, slightly Briticized English.

For five years, they traveled and lived in hotels until Wendy began to long for a home. Reves, who had already lost two homes, clung to their temporary life. One day in 1953, he took her to a business lunch. While Reves met with Hervé Mille, editor of *Paris Match*, she chatted with Mille's brother, Gérard, a decorator. As they talked, Gérard, who had heard she was househunting, mentioned that Villa La Pausa was for sale. Wendy knew of the house; it had been built for Coco Chanel, the fabled couturière, in 1927 when she was the Duke of Westminster's mistress. The estate name paid homage to local legend that Mary Magdalene had once stopped to rest in a Roquebrune olive grove in her travels along the coast.

Wendy, who never interrupted Reves' business conversations, rapped on the table for his attention and said, "I am going to the Côte d'Azur *ce soir.* Do you want to come with me or not?"

"What's wrong with you?" the startled Reves asked.

"Coco Chanel's villa is for sale and I am going to buy it."

"We go tomorrow."

"I'm going tonight."

And so they did, journeying to Nice on the night sleeper and then driving to Roquebrune to find a near-ruin, "all overgrown and disheveled." Mrs. Reves remembers walking to a great olive tree on the grounds, gazing at the villa's spare, beautiful lines and saying,

Villa La Pausa's salon, in its day, saw its share of famous artists, writers and statesmen. Here the elegant room welcomes visitors to the museum.

"Poochie, I'm going to buy it. This is my own." The actual purchase took a while. Chanel was a nonstop talker who kept the negotiations going for days, apparently for the sake of conversation with a fascinating man. Finally, Reves told her that if she didn't come to terms at once, the deal was off.

Restoring the house and grounds took more than a year. They lived in nearby Monte Carlo while the renovation went on and began the hunt for beautiful things. Under Reves' tutelage, Wendy had learned her way around the museum treasures of Europe. At first, when they went to galleries and saw something that appealed to them, she would shyly say, "I like it." Later, as her taste and confidence grew, she could firmly declare, "Buy it."

He didn't always. Reves was an extremely cautious collector who sometimes missed opportunities because he wanted days to consider a purchase and because he looked for bargains. John Rewald, the Impressionist scholar who became a friend, was stunned once to discover that although Reves yearned for a Seurat drawing, he could not be persuaded to bid for one at an auction where prices could get out of hand. "He had to be in control always," Rewald says.

Villa La Pausa was not fully furnished in 1955 when Winston Churchill came to lunch for the first time. Churchill, who was staying a few miles down the coast at Lord Beaverbrook's villa at Cap-d'Ail, loved the Riviera and he loved the Reveses' house and on his next visit for dinner wondered if he might be a houseguest some time. Thus began a tradition that made their home one of the landmarks of the region.

Reves once calculated that from 1955 to 1960, when the great man's visits ceased, his twice-a-winter sojourns added up to a period of 13 months. They could not have been easy for the hosts. Churchill came with mountains of baggage and a large entourage, and while he was in residence the household staff revolved around him. But these times were vital to the guest. The published diary of his personal physician, Lord Moran, speaks of the great glooms Churchill suffered in his last years and of the temporary "uplift in his spirits" that would follow the trips to La Pausa.

Inevitably, the visits inspired gossip. Noel Coward's diary has a brief account of a 1956 lunch with Churchill's daughter-in-law Pamela, when she reported the family's dismay over "the Old Man's sudden infatuation with one Wendy Russell." If he loved her, Mrs. Reves says, it was purely as a surrogate daughter. "I suppose we had the most marvelous relationship he had ever had with any human being."

She would sit at his feet beside his favorite 17th-century library chair and stroke his hand and cheerfully pretend not to see great clumps of cigar ash dropping on the rug. One fine day, when the Riviera sun had failed to ease his melancholia, she made him a whisky-and-soda and he said wearily, "My deah, you do so much for me. And I do nothing for you." Mrs. Reves is a gifted mimic and Churchill's words emerge sounding eerily like recordings of his speech patterns.

"I said, 'How silly you are. What do you mean you do nothing for me? You have given me the greatest gift that anyone in the world could give.'

"He raised his head and looked at me and said, 'My deah, what did I do? What did I give?' And I said 'You gave me self-security.' "

"My deah, you were always self-secure."

"No, I really wasn't. Just since you came into my life."

"Oh my deah, I am so glad."

The one instrument of security she did not need was a marriage certificate. But Reves, who was 12 years her senior, developed cardiac problems and began to worry about her future. In 1964, his lawyers persuaded her

One of 41 major paintings in Reves Collection, Manet's *Brioche with Pears*, 1876, reflects artist's interest in Impressionism. Manet's still lifes of period were more widely admired than his earlier figure paintings.

The Water Can by Cézanne, ca. 1879-80, is the earliest one of three Cézannes that were part of the Reves bequest. A small still life of severe simplicity, this painting belongs to post-Impressionist phase of the artist's work.

to suffer a quiet little wedding ceremony in Switzerland. As the years passed, both of them worried about La Pausa's future. Reves had no other immediate family; Wendy was and is alienated from the son born of her first marriage and raised by paternal grandparents.

The villa and its contents would have gone to the town of Roquebrune as a museum, but the mayor ended that possibility by exhibiting a vulgar interest in its value. Then, in the 1970s, an influential local woman set out to erect an apartment house on a slope alongside La Pausa, threatening yet another assault on the local landscape.

As Reves' heart condition worsened, their entertainment seasons ceased. The couple divided the year between Roquebrune and Switzerland, where, in Glion, above Montreux, they built a chalet. In his final illness, Reves, bitter about the apartment building, said to her one day, "Pucy, don't leave one thing to France."

Gauguin vase has portrait of Mme. Schuffenecker on one side and serpent slithering up tree on other.

The effort to find a new home for their collection seems to have begun before his death. In all, Mrs. Reves says that emissaries of seven museums from three countries came to talk, but for lack of space, money and other reasons did not stay to negotiate. "One night after the seventh city had been here, I was sitting in the great hall with my hand to my head and said, 'I've just got to find the right place.' Then I thought, 'Dallas. That Mr. Parker. He was so nice.' "

Four years earlier, La Pausa was to have been a stop on a DMA-sponsored art tour of France, but at the last minute the visit had to be canceled because Reves became ill. When Mrs. Reves called Dallas to tell Harry Parker, she was impressed by how understanding he was. Now, she asked a favor of an old friend, Gérald Van der Kemp, the former director of the Versailles museums (SMITHSONIAN, March 1977), who knew his way around the American art establishment. "It took me three days to find him in Mexico. I said, 'I don't want to knock on their door. Would you please make them come knocking on my door?' "

Now the Reves possessions were on their way to a city that Emery Reves, whose business travels once covered 30,000 miles a year, had seen just once during a brief airport stop and that his wife had known only as a distant place of dreams (in Marshall, Texas, the house she lived in sat on the road to Dallas).

The collection would take a while getting there. After the pack-up, the crates sat in a Paris warehouse for nine months, in part because French authorities were reluctant to see the art leave the country and under the law could refuse to issue export permits. The Reveses' attorney, Gilles Durant des Aulnois, says that Hubert Landais, director of the museums of France, first proposed a donation of three paintings from the collection. "Wendy said no," according to des Aulnois, "and threatened to roar down to his office." Actually, she threatened to burn the art rather than give it to France.

It was Harry Parker who found a solution. Attending a museum reception in Paris, he picked up a postcard appeal for contributions to a fund to buy a $1.2 million Bonnard for the Centre Pompidou. Parker proposed giving the museum $750,000, and the compromise was accepted by Landais. Parker's idea was to pay for the donation by selling off a single Reves piece, a large Manet portrait of a woman. When it was offered at auction, however, the picture failed to reach its reserve price and was withdrawn. In the end, Mrs. Reves paid $750,000 toward the Bonnard.

At last, the bequest was free to leave. At Charles de Gaulle airport, on April 3, 1984, as Parker stood by to oversee the loading of a chartered Flying Tigers DC-8, there was a final eight-hour delay while customs officials opened and checked the contents of every crate before allowing the shipment to embark.

Nineteen months later, the new wing was ready. *Le tout* Dallas, the women and men with the money or status to support the city's cultural efforts, sat down to celebrate the Reves gift at a dinner in I. M. Pei's City Hall building. There was a trooping of the colors. There was a lemon mousse in the shape of Texas, with a chocolate star for Dallas. There was a letter of praise for Mrs. Reves from the President of the United States. The Governor of Texas thanked her. The Mayor of Dallas gave her a key to the city.

The guest of honor looked overwhelmed, awed and touched. As she said when she rose to acknowledge the tributes of the city, state and nation, "I'm a very emotional woman." She talked about the little girl who long ago sat on her great-aunt Vesta's porch in Marshall, shelling black-eyed peas and watching the cars go by, trying to imagine the unknown city at the end of the highway. She had taken the long way around, but Wendy Reves had finally made it to Dallas.

Flowers in a Black Vase, a pastel by Odilon Redon, is an ethereal vision of color and forms in space.

THE
SHIRLEY TEMPLE
Heidi
DOLL

Shown smaller than actual size of 14″ in height.

© 1937 Fox Film Corporation Ren. 1961
© 1986 Twentieth Century Fox Film Corporation
ALL RIGHTS RESERVED
Twentieth Century Fox Film Corporation TM

Officially authorized by Shirley Temple...

THE SHIRLEY TEMPLE Heidi DOLL

One in a series of heirloom-quality porcelain dolls capturing Shirley Temple in her most famous movie roles.

The Danbury Mint is pleased to announce an enchanting new Shirley Temple doll – authorized by Shirley Temple herself! This fourteen-inch doll will depict Shirley Temple – dimples, smile, curls, ringlets and all – just as she appeared in the famous 1937 movie, "Heidi."

An abundance of bisque porcelain

The Shirley Temple "Heidi" Doll is lovingly crafted in fine imported bisque porcelain. In fact, her entire upper body is formed of bisque porcelain, as are her legs and arms. Such an abundance of porcelain is unusual except in the most expensive collector dolls.

Remarkable special touches

Eyelashes, eyebrows, and lips will be artfully painted by hand. Her hair – those remarkable curls and ringlets – will be styled by hand.

She wears her famous "Heidi" outfit – complete with flowered vest, green striped apron and black tights. Notice the frilled petticoat undergarment, the crisscrossed ribbon tying her vest, and the matching red ribbon on her straw hat. She's even wearing those adorable, brown shoes!

An exceptional value

The Shirley Temple "Heidi" Doll is available at the attractive original issue price of $90, which may be paid in three convenient monthly installments of $30 each. This is a remarkable value when you consider that previously available Shirley Temple porcelain dolls have sold at prices in excess of $200.00. You will receive a display stand at no extra charge. What's more, your doll will be accompanied by a personalized serially-numbered Certificate of Authenticity.

Eyelashes, eyebrows and lips will be lovingly painted by hand.

A Danbury Mint exclusive

The Shirley Temple "Heidi" Doll is available only from the Danbury Mint. Moreover, as a registered owner of this doll, you will have the privilege – but not the obligation – of acquiring other dolls in the collection with matching serial numbers registered in your name only.

Please respond promptly

You need send no money now. Simply complete the Reservation Application and return it promptly. *Do reserve your doll today!*

She's even wearing those adorable, brown shoes!

Her costume is authentically recreated... her green striped apron and flowered vest.

The Danbury Mint • 47 Richards Avenue • Norwalk, Conn. 06857 ©DM

RESERVATION APPLICATION

THE SHIRLEY TEMPLE Heidi DOLL

The Danbury Mint
47 Richards Avenue
Norwalk, Conn. 06857

Please return promptly.

Please accept my reservation for *The Shirley Temple "Heidi" Doll*. The doll will be expertly crafted of imported bisque porcelain, lovingly hand-painted, and authentically attired in the adorable costume that she made famous.

I need send no money now. I will pay for the doll in three convenient monthly installments of $30 each,* the first being billed before shipment of my doll. If I am not satisfied, I may return my doll within thirty days for a replacement or refund, and this subscription may be canceled by either party at any time.

*Plus $1 per installment for shipping & handling.

Name _____
PLEASE PRINT CLEARLY

Address _____

City _____

State _____ Zip _____

☐ Check here if you want each monthly installment charged to your: ☐ VISA ☐ MasterCard

_____
Credit Card Number Expiration Date

Signature _____

Allow eight to twelve weeks after payment for shipment.

L140

By Fred Anderes and Ann Agranoff

The magic chill of ice palaces still beckons us

In the 19th century such glittering fantasy castles were the rage; now, new construction methods are reviving the old—cold—art

St. Paul Dispatch hired a New York artist to paint the cover for this special 1888 Carnival edition.

It looks like a fairy-tale castle. Massive yet delicate, thick yet translucent, shifting in color from shadowy blue to warm rose and gold, its highlights sparkling like the facets of a giant jewel. Spacious and elegant but not the exclusive province of nobility, it reigns briefly over an urban skyline and then vanishes, as completely as a dewdrop in the sun. While such fanciful structures as this may not seem, at first, to make economic sense, they have been built and will continue to be built, not out of glass, concrete and steel, but from snow and ice.

Ice palaces, full-size buildings made entirely with blocks of ice, were first built in Czarist Russia and flourished during the late 19th century in Canada and the United States. Their purpose was to delight and entertain, and they usually provided the lively focus for a winter carnival. Glittering beneath the winter sun, their designs were inspired by medieval castles, Gothic cathedrals and Art Deco fantasies.

Some were gigantic, stretching longer than a football field or reaching as high as a 14-story building. Today there is a resurgence in popularity of these magical structures. At winter carnivals around the world, architects and ice-castle entrepreneurs are working on new construction techniques and resurrecting old methods to meet the demand. The largest castle built in this century (opposite) went up last January at the St. Paul, Minnesota, Winter Carnival to commemorate the festival's 100th anniversary. It stood 128 feet 9 inches at its highest point, 90 feet wide and 120 feet long. The ice palace required the efforts of 700 volunteer construction workers laboring full-time under freezing conditions for nine weeks to cut the ice blocks and move 10,000 of them into place, each one weighing 600 to 800 pounds. Built commercially, the construction could have cost up to $1.5 million.

The first well-noted ice palace was built in Russia as the setting for a monstrous joke. On the frozen Neva River, in the winter of 1739-40, a shivering bride and groom spent their wedding night in a glacial villa commissioned by Empress Anna Ivanovna. The winter was one of the coldest ever recorded; the rivers were frozen solid and birds, it is said, fell dead from the sky as they tried to fly south. Empress Anna's courtiers conceived the idea of the ice palace as a way of distracting people from the bitter cold. The palace was designed as a setting for a honeymoon that could afford Anna and her subjects considerable amusement.

Although Anna funded the ice palace generously, she was surely marching in step with the eccentric and brutal parade of Russian czars. A very tall, fat woman, she devoted herself to shooting and riding and exer-

For 1986 centennial of St. Paul's Winter Carnival, Ellerbe Architects designed this ice "whimsy."

Empress Anna's Palladian ice villa was honeymoon suite for reluctant couple, victims of malicious joke.

Caged bride and groom traveled from church to castle by elephant, followed by a bizarre procession.

cising her rather malicious sense of humor. She was entertained by a troupe of dwarfs as well as deformed people and idiots. Four of her six court jesters were members of ancient noble families that she delighted in humiliating.

When one of these jesters, Prince Mikhail Golitsyn, angered Anna, she decided to make him the butt of one of her celebrated jokes. She insisted that the recently widowed nobleman marry one of her servants, a woman of exceptional ugliness nicknamed Buzhenina, after the Empress' favorite dish of roast pork with spiced vinegar and onion sauce. After the church ceremony, the bride and groom—swathed in furs, seated in an iron cage fastened to the back of an elephant—led an elaborate parade to the ice palace (above). The Empress recruited a hundred or more other couples from various provinces to join the procession, riding on horses and camels or in sledges drawn by such unlikely animals as wolves and pigs. The celebration's climax was the stripping and bedding down of the bridal couple in an ice bed, with guards posted outside to make sure they spent the whole night in the frozen mansion. According to one account, the naked couple survived the night by sprinting about and slapping each other. (Although the marriage was off to a shaky start, it proved a good one; Buzhenina bore her husband two sons to carry on the family line.)

Despite what we now consider its shameful use, Anna's ice palace was the most exquisite ever crafted. Its architect, Eropkin, created a sort of Palladian villa. The builders carefully selected the clearest ice from the Neva, measured it with compass and ruler, cut it into blocks and set the blocks in place with the help of cranes. Water, used as cement, froze in the cold air and joined the blocks so smoothly that they appeared to be one piece. Approaching the palace was like wandering into fairyland. A border of trees and birds, sculpted from ice and painted in natural colors, encircled the palace, and dolphins and cannons guarded it.

The ice villa was 80 feet long, 23 feet wide and 33 feet high. Although most of the palace was left transparent, the pillars, doors and window frames were painted to simulate green marble. Inside, everything was made of ice except for sets of real playing cards and counters frozen onto the surface of the drawing-room table. A gracefully carved cupboard in the corner of the drawing room displayed a tea service and goblets and tumblers, along with ice replicas of all sorts of tempting dishes.

In the bedroom, the craftsmen had carved a large curtained bed, topped with a feather mattress, a quilt and two pillows with a nightcap laid out on each. On special occasions, the ice logs in the bedroom fireplace and the ice candles on the dressing table were set

Architects Fred Anderes and Ann Agranoff wrote Ice Palaces *in 1983 (Abbeville Press). Anderes is currently researching structural properties of ice.*

aflame after dousing them generously with petroleum.

The Russians built other ice castles, some even more remarkable than Anna's, but the peak of their development and popularity was reached more than a hundred years later in the United States and Canada. North American cities built ever larger castles as centerpieces for the enormously popular winter carnivals. Anna's ice palace represented the expression of royal whim, but these new palaces were communally supported by sportsmen, merchants and city boosters who bought shares in carnival associations.

The first ice palace in North America

Charming, quaint and cold, Montreal provided the perfect setting for the first major North American ice palace in 1883. A sports carnival was suggested by a member of the Montreal Snowshoe Club as a way to show off the glories of the Canadian winter and promote the sports of skating and tobogganing. Grand balls and parades were soon added to the program when the Governor General and his wife, a princess, took an interest, and when visitors such as the Vanderbilts began to capture the attention of the newspapers.

A well-known local architect, A. C. Hutchison, designed a simple castle as a centerpiece for the first carnival. This forerunner palace tested out the qualities and capabilities of ice and led to the later construction of larger and more elaborate structures. The experiment amply demonstrated the material's beauty. Clear winter sunlight shone through the castle "in a gorgeous aquamarine . . . the colors of auroral brilliance changed with each step the gazer took," a reporter wrote. At night, spectators crowded around the castle for fireworks along with a mock battle where members of snowshoe clubs stormed the palace using rockets, smoke bombs and Roman candles. Touring the castle itself, visitors admired its icy corridors and arches. Sometimes a band and hot beverages awaited them in spacious inner rooms. At night the audience was thrilled by the palace's brilliant electric lights (still a novelty in the 1880s).

The glamorous Montreal carnivals continued, and each year the ice palaces became more elaborate and distinctive, highlighting Hutchison's mastery of the Gothic style. Every winter the palaces grew larger, until 1889 when a castle designed to be 118 feet high came out shorter—but only because of warm weather. Combined with accusations of price gouging and charges of "trying to steal the unenviable fame of their Niagara Falls Brethren," Montreal's festival fell on hard times for the next 20 years.

St. Paul was the fastest-growing city in the United States in 1886. Outraged when a New York newspaper described their beloved city as "another Siberia, unfit

In 1896, C. E. Joy designed this vast ice palace, the largest ever, to promote Leadville, Colorado.

Joy's St. Paul ice castle in 1887 was a Gothic vision of flying buttresses and an octagonal main tower.

The 1889 Montreal palace was marred by a warm spell that created two-inch gaps between ice-block layers.

Costumed revelers (above) at the 1888 St. Paul carnival wait for the parade to begin in front of the ice palace. Quebec's 1894 festival featured a 50-foot, walk-through, ice beer bottle (left).

for human habitation in winter," they decided to celebrate their own "magnificent climate" with a carnival. They brought in Hutchison from Montreal to design and build the first ice palace in the United States. The carnival and festivities surrounding its beautiful and renowned ice castle were a resounding success that even surpassed its Montreal counterpart. In the following years, each carnival was more splendid than its predecessor. Architect C. E. Joy, who had advised the carnival association to import Hutchison in 1886, went on to design three of the most memorable ice palaces—two in St. Paul and one for the Crystal Carnival in Leadville, Colorado.

Joy's first ice palace in St. Paul in 1887 was the tallest ever built and probably the most beautiful. He created a Gothic fantasy, complete with a huge skating rink and an octagonal central tower. Visitors entered through a massive archway 15 feet high and nine feet thick. Eight flying buttresses supported the central tower, which was capped by a slender turret as high as a 14-story building. His palace the next year used a record number of blocks of ice—more than 55,000. (An average Montreal castle used 12,000.) Complete with turrets, arches and battlements, this huge structure covered about an acre. Five large niches carved in the front wall of the main tower (130 feet high) held statues of a polar bear, snowshoer, skater, tobogganer and curler. Like Anna's ice palace, this castle was the setting for a wedding, but this time the ceremony was performed before 6,000 guests inside the palace—and the pair had decided to marry of their own free will.

Two mild winters, one after another, dampened St. Paul's enthusiasm for ice-palace construction, so Joy was unable to design any more until he was hired by the Crystal Carnival Association of Leadville, Colorado. Leadville had been a booming mining town until the silver panic of 1893. By 1895, though the hills still held abundant deposits of metal, the cost of mining and smelting the ore was not worth it. Everyone was out of work and even the inhabitants of the once-prosperous red-light district moved away. In an effort to keep Leadville on the map, a group of saloon keepers, gamblers and other local businessmen decided to attract tourists with a winter-long ice carnival. A local paper wrote proudly: "People in the valleys are beginning to realize that Leadville is something more than a rude mining camp. The Cloud City has made her entree, at last, into society circles."

Like other groups before them, the Crystal Carnival Association wanted the largest ice palace ever built, so they hired C. E. Joy. In their desire to open the festival before Christmas, they put more than 300 men to work on the castle. Unusually mild weather caused the ice blocks to melt faster than the men could lay them. Huge lengths of muslin and canvas were draped over the building to shade it. One of the towers collapsed and one of the derricks toppled. The temperature finally dropped, but the Leadville palace did not come out exactly as planned. However, at 435 feet its base stretched longer than any other ice palace and its innovative interior offered a wooden pavilion with heated ballrooms next to a glacial skating rink. Danc-

ers and skaters viewed each other through glass panels. Both shoes and ice skates twirled to the lively strains of the Fort Dodge Cowboy Band, which performed from a balcony between the rink and the grand ballroom.

Magnificent as the palace was, it didn't attract the number of visitors the carnival association had hoped for. A thaw began to melt the castle in the early days of March and an unseasonable snow damped the fireworks at the Farewell Fete. No more ice palaces were planned in Leadville.

In this period of giant ice palaces and boundless expectations, the most spectacular disappointment occurred in Montreal in 1909. A local architect had developed an ambitious plan with a tower 190 feet high surrounded by other towers of record heights. Again, as in Leadville, weather threatened the entire project. It also seems that some of the expertise had been lost during the 20-year interim. In photographs of the completed castle, the tops of the towers look sawed-off and do not appear to be even 50 feet high.

Bad luck continued to mar the carnival; the program was ruined by a three-day blizzard and a downpour spoiled the storming of the castle on the closing day. As the small crowd moved away, a noise like thunder rumbled and one of the main towers collapsed. One salesman, who was exhibiting his company's wares in the tower at the time, saw the electric lights go out and heard a roar as the structure crumbled around him. The Montreal *Gazette* reported that as soon as he realized he had survived, he groped his way out and paid two bystanders $5 to rescue his showcases.

People felt tremendously let down when a fairy-tale ice castle did not fulfill their expectations or when a couple of warm winters canceled out all plans for building one. By the 1920s, ice-palace building had virtually come to an end.

Their magic continued, however, and as Bob Olsen, an architect and ice-palace historian from St. Paul has written: "It is as if the Palaces have a soul, for everyone I've met, from people on the bus to the men in the

Lithograph of the 1885 Montreal carnival shows rockets in "flights of color from every turret" of palace. Inset is 75-foot "Tower of Babel" topped by figure dressed in costume of the Le Trappeur Snowshoe Club.

city architect's office, speaks of the Palaces as if they will again appear."

A major effort was made in the 1930s during the Depression. Again in response to trying times, St. Paul built a series of Art Deco ice palaces as symbols of hope, supported in part by New Deal funds. The first of these generated terrific excitement in 1937. While work crews put in a 16-hour day to finish the castle, a crowd of 100,000 people gathered and 20,000 automobiles choked the roads leading to the site. This simple ice palace was only 193 feet long, 86 feet across at its widest and 60 feet high. It was really a continuous wall built to enclose three spaces, but still its changing thickness created dramatic effects of translucency, opacity and shadow.

Building ice palaces is cold, hard, wet work. The blocks of ice are large and weigh at least 400 pounds apiece. Before they can be assembled, they have to be cut from a frozen river or lake. Recently, one volunteer ice-palace builder in Saranac Lake, New York, explained that the open part of the ice-cutting field acts as a magnet for trouble: "We always have a few clumsy ones who go swimming." The saddest task comes at the end of the carnival when the ice palace is taken down, so that no one gets hurt in the ruins.

Today, ice palaces enhance successful winter carnivals all over the world. In Sapporo, Japan (opposite), and in Harbin, China, yearly festivals feature small palaces and large sculptures, all exquisitely fashioned from ice or snow. In the United States, the town of Saranac Lake has put up an ice palace for their carnival every year since 1947.

Although most modern ice palaces are still built with blocks of ice cemented with water, scientists and architects are now experimenting with new construction methods. Architects in this country are working with strong, flexible modern structures like inflatable bubbles that can be set up as a framework and sprayed with water or slush, which hardens into an icy skin in cold weather. In Germany, Marcel Kalberer has inspired design students to build a "City of Ice," using netting, awnings and balloons for framework (left).

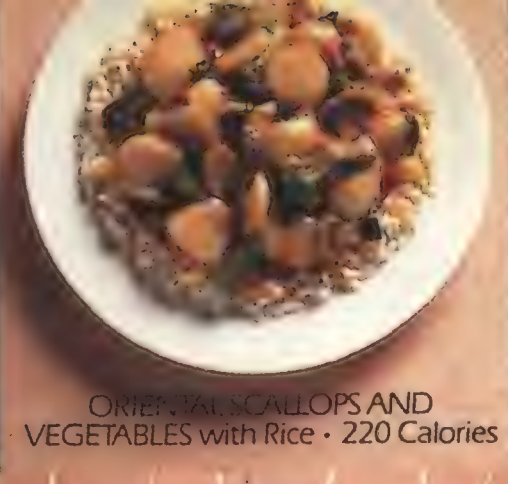
This month, Leadville's revived Crystal Carnival will feature the most intricately adorned ice palace since Empress Anna's. Ice-palace entrepreneur Dennis Ammerman has gathered prize-winning ice sculptors to provide this Colorado palace with turrets, a drawbridge, and human and animal figures. Four flying buttresses will support its 60-foot-tall main tower. Ammerman also has ambitious plans to construct the first indoor ice palace over a skating rink in a Texas atrium later this year. In 1988 he hopes to build an ice castle high in the mountains of Australia. Its interior will be as lovely as the exterior because insurance policies there do not prohibit visitors from strolling through the icy rooms as they do in this country.

With new construction techniques being developed and the number of winter carnivals increasing, we may be enjoying an ice-palace renaissance. It is now possible to enjoy the same magic these structures inspired in an earlier time, the sight of delicate translucent palaces that glow in the night—with walls that dissolve at the touch of a fingertip.

Marcel Kalberer worked with design students to build his "City of Ice" using new construction techniques.

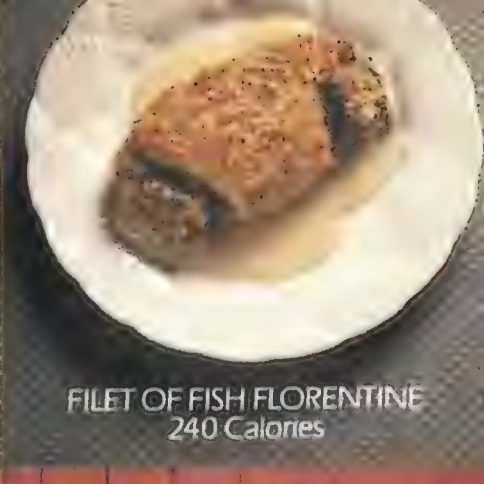
The winter festival in Sapporo, featuring 200 giant snow and ice sculptures, has been celebrated since 1950.

CHICKEN à l'ORANGE with
Almond Rice • 270 Calories



ORIENTAL SCALLOPS AND
VEGETABLES with Rice • 220 Calories

ZUCCHINI LASAGNA
260 Calories



FILET OF FISH FLORENTINE
240 Calories

CHEESE CANNELLONI with
Tomato Sauce • 270 Calories

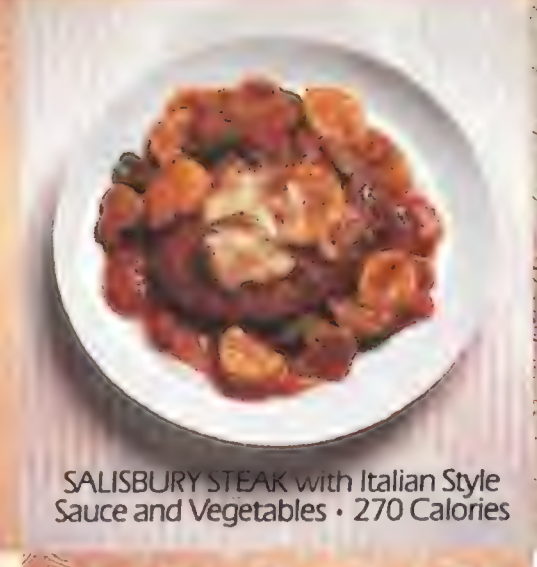
MEATBALL STEW
270 Calories

LINGUINI with
Clam Sauce • 260 Calories

CHICKEN CACCIATORE
with Vermicelli • 280 Calories

TURKEY DIJON — with
& Carrots • 280 Calories

VEAL PRIMAVERA — with
Vermicelli • 250 Calories

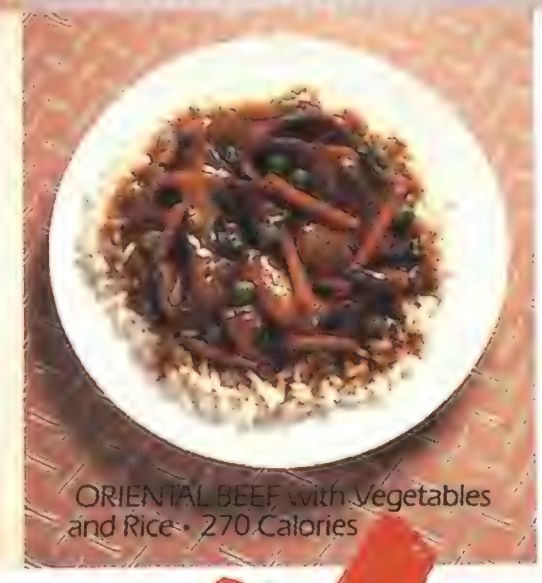


SALISBURY STEAK with Italian Style
Sauce and Vegetables • 270 Calories

BEEF & PORK CANNELLONI
with Mornay Sauce • 270 Calories

FILET OF FISH DIVAN
270 Calories

GLAZED CHICKEN with
Vegetable Rice • 270 Calories

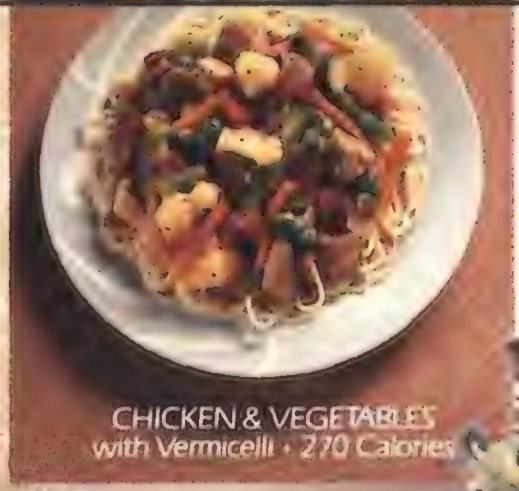


ORIENTAL BEEF with Vegetables
and Rice • 270 Calories

©1987 Stouffer Foods Corporation

More

SPAGHETTI with Beef and Mushroom Sauce • 280 Calories

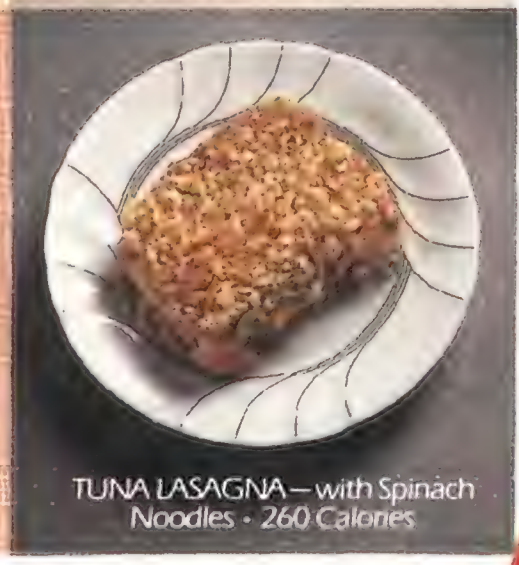


CHICKEN & VEGETABLES with Vermicelli • 270 Calories

CHICKEN CHOW MEIN with Rice • 250 Calories

FILET OF FISH JARDINIERE Scalloped Potatoes • 280

STUFFED CABBAGE with Meat in Tomato Sauce • 220 Calories



TUNA LASAGNA—with Spinach Noodles • 260 Calories

Satisfaction

There's more to the great taste of Lean Cuisine. Much more. Twenty-one deliciously different, nutritionally balanced entrees under 300 calories. All made with that special Stouffer's touch.

So, no wonder it's the taste more people enjoy than any other.

LEAN CUISINE®. ONLY FROM STOUFFER'S®.

By Donald Perry, with Sylvia Merschel

As cities crumble, plants may be at the root of it

To keep standing, urban civilization must withstand endless assaults by invaders such as lichens, mosses and strangler figs

Skull gathers moss in British Columbia forest; wind can blow moss spores across oceans before they sprout.

"How much farther?" I yelled nervously in Spanish to my Costa Rican guide. We were on a hill above his home in an isolated jungle valley and while he scaled the precipitous terrain with ease, I had fallen behind, aware that a misstep would send me careening down a rocky slope entangled with lush tropical vegetation.

"Not far. It's just ahead."

He waited for me at the crest of the hill, then we cut our way through the ensnaring second growth for a few yards before coming to a halt at the crumbled ruins of a pre-Columbian village. I remember feeling very excited because these were virgin ruins, unknown to the "outside" world of archaeologists and relic hunters. Tree roots imprisoned the building stones that had fallen into piles, collecting dirt and a coat of vegetation. I sat down on a large foundation stone and could not help thinking of the day when *our* cities will be collapsed and covered with vegetation.

These are foreign thoughts to those of us who live in cities and are constantly barraged by the sounds of automobiles, buses, schoolchildren playing, people going to work, and the construction and reconstruction of buildings, streets, sidewalks, storm drains, sewers and utilities. We take these activities and, for that matter, civilization for granted, and are almost unaware that we are gripped by a never-ending struggle to defend them against a multitude of natural enemies such as violent windstorms, floods, hail, rain and ice. Of all the natural forces that would eventually turn our cities into rubble, plants are frontline combatants; they are virtually nature's living demolition squad.

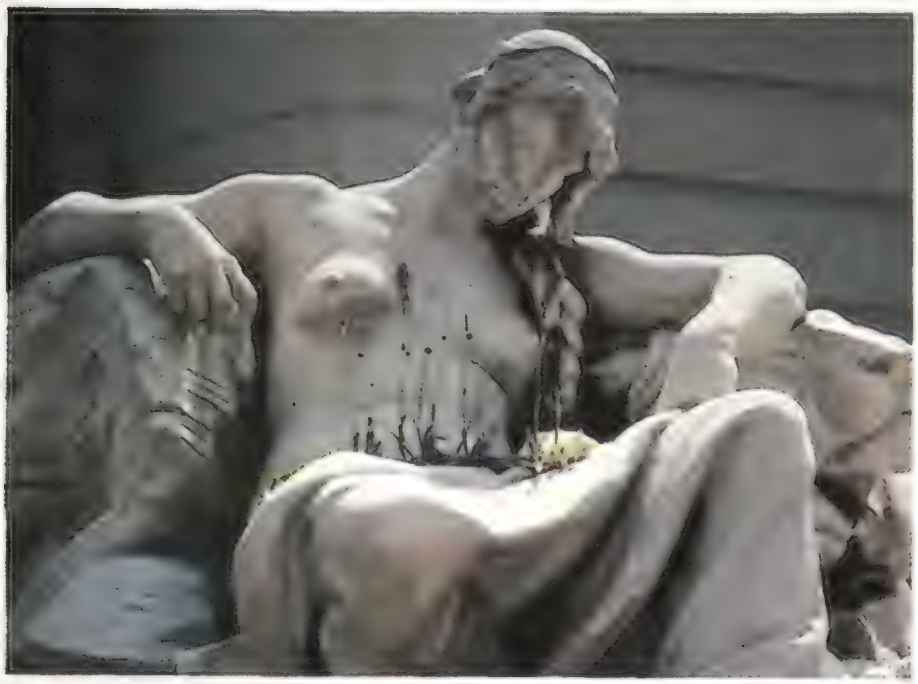
The best places to see this vegetation in action are in tropical cities, where year-round warm weather and high humidity assist the assault on civilization. Downtown San José, the capital of Costa Rica, is a perfect example. Just ten degrees north of the Equator, the city is an ideal proving ground for some rather seductive species.

Much of the greenery one sees while walking around San José is not made up of domestic plants, but rather invaders from the wild jungles near the city. Some of these plants, which I call "ediphytes" (building-plants), are easy to spot because they squat in odd, inaccessible places: roofs, gutters, parapets, bell towers, statues, abandoned cars and walls. I have seen high-rise buildings, constructed only a few years ago, sprouting hundreds of ferns from joints in surface facades. Ediphytes come in many varieties, including mosses, flowering shrubs and trees like the strangler fig, which can grow more than 30 feet tall.

The methods used by colonist plants to establish themselves are numerous, but the most common is an aerial approach. The air and sky are literally filled with miscroscopic spores of mosses and fungi. These are so light they can travel in jet streams and air cur-

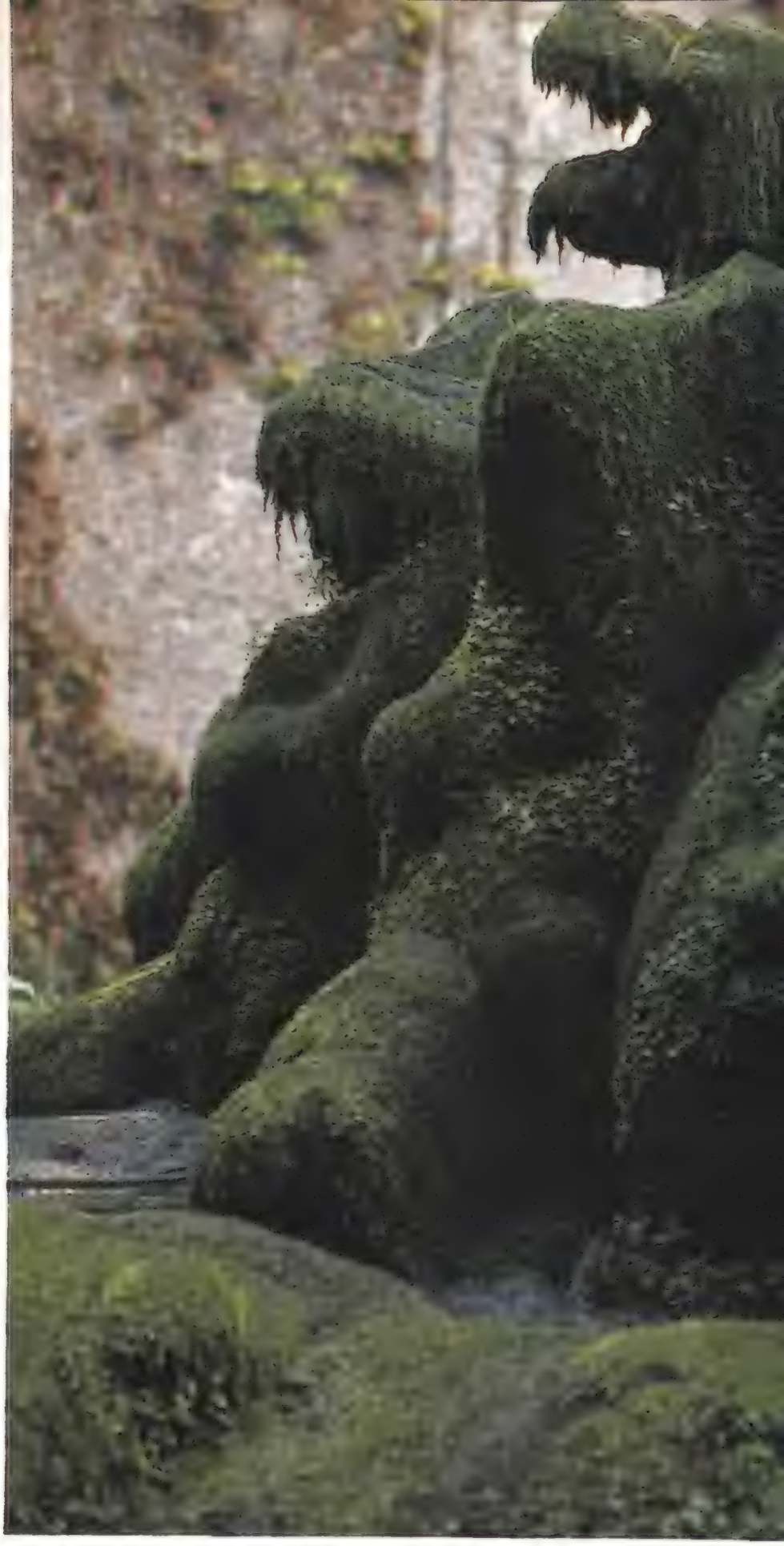
Along the edge of Manhattan's West Side, an unused railroad bed is quietly being taken over by plants.

This rooftop garden in San José, Costa Rica, was not planted there; wild plants are gaining urban foothold.



In front of New York City's Custom House, statue of "Africa" contemplates "ediphytes" growing in lap.

First colonists need scant environment, like this junked sports car, to prepare a base for higher plants.



Dry fountain at Villa d'Este near Rome is a bizarre mixture of art and nature, under thick cover of moss.

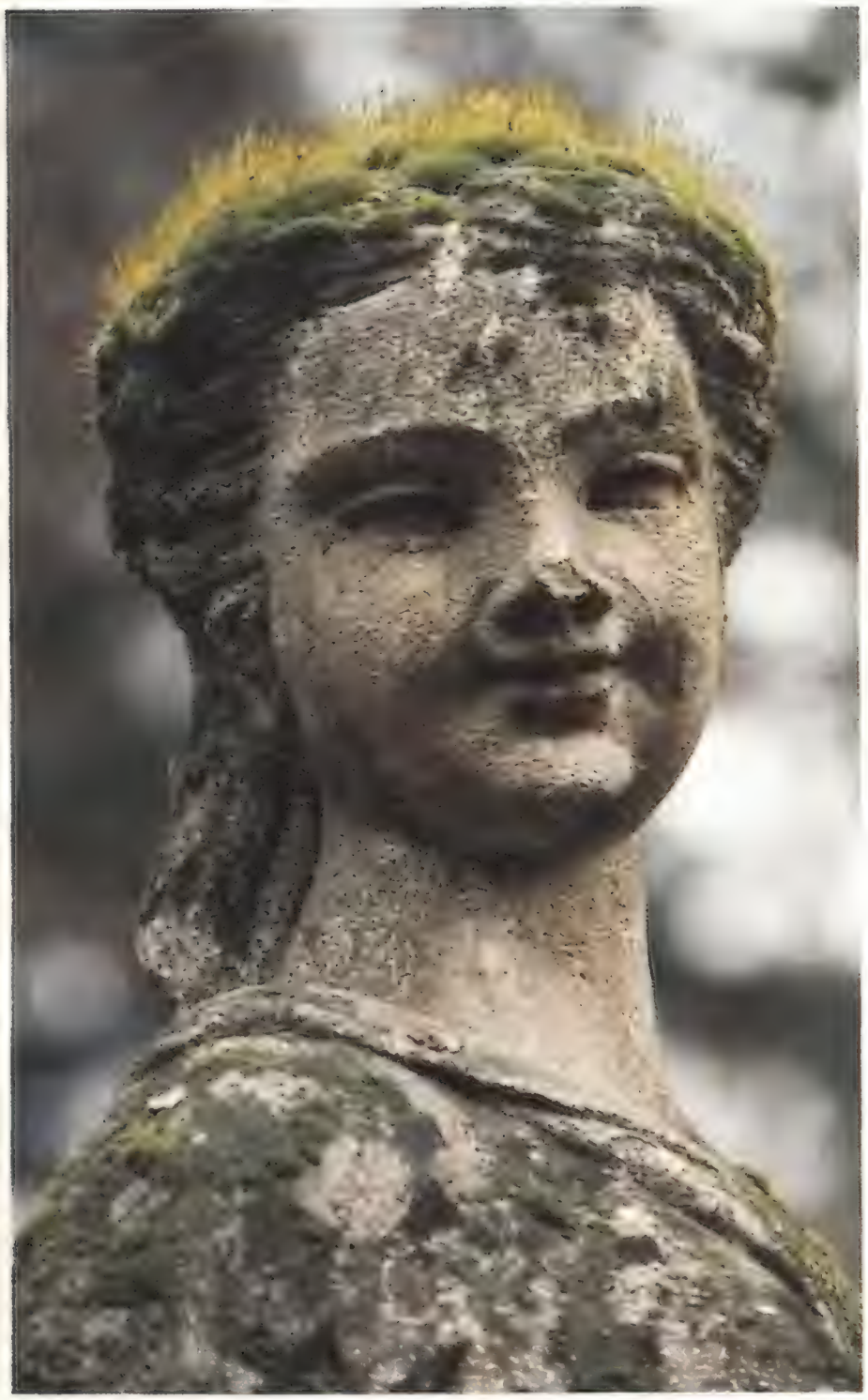
rents to be deposited like parachutists all over the world. Only a small fraction of these airborne propagules will find a suitable place to grow. Certain seeds, such as dandelions and cattails, have plumes and can drift over long distances on a light breeze. Larger seeds, such as those of maple trees, have aerodynamic wings that need a stiff wind for flying to distant locations. Some plants have barbed or sticky seeds that hitch rides on the bodies and plumage of birds. Birds

Efficient urban colonizer, moss can dry out, appear dead, then regenerate from spores after a soaking.

also ingest and deposit seeds during flight or at rest. Nonaerial seeds and spores move along the ground in the fur of animals or on tire treads, while unsuspecting humans may transport seeds on the soles of their shoes.

Often the first ediphytes to find the barren facades of new structures are blue-green algae that prepare surfaces for more advanced plants. Algae begin the process of succession by manufacturing a film of growth-promoting nutrients. These nutrients aid the establishment of larger species such as ferns and mosses that, in turn, capture dust and debris in their root masses. Thus soil begins to form and becomes a nutrient bed for a garden of hardy species.

Plants find footholds on anything from glass to plaster, and some species flourish in soil poisoned by heavy metals or by mining wastes. This "green seizure" begins any place that humanity settles: North America, Europe, the tropics and the Arctic, in every



Stone maiden at Villa Ducale near Venice has wig of moss, which can sometimes sprout in 30 minutes.

In Beirut's war-ravaged streets, the ailanthus or tree of heaven is quickly taking over the city's ruins.

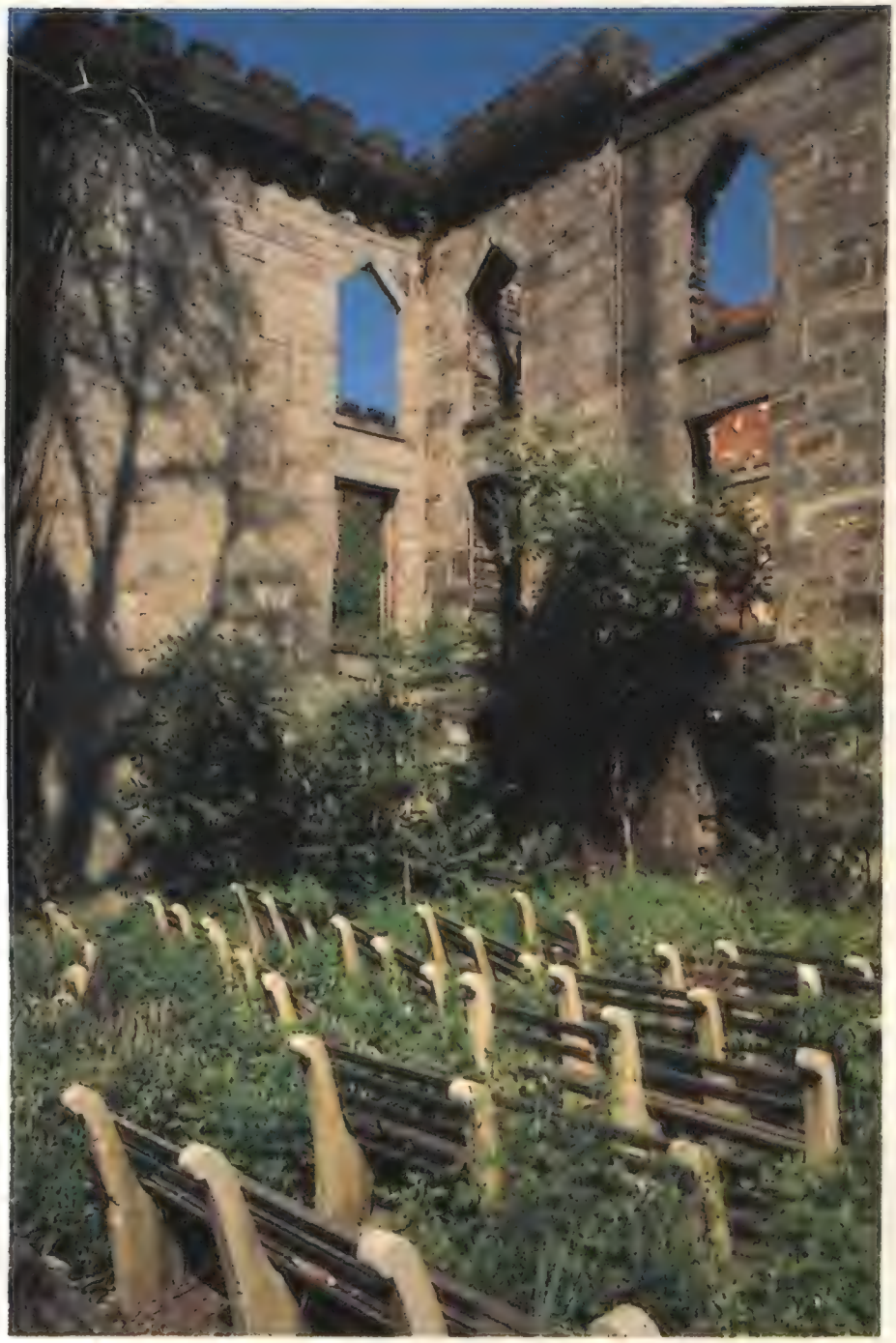
climate from the coldest to the driest places on Earth.

If these plants only squatted upon growth sites, they would not pose a long-term threat to human works. Plants, however, are organisms that must obtain a variety of nutrients for their survival. These are dissolved by a plant's chemicals and extracted from support surfaces. Even glass, which contains a variety of useful elements, cannot fully resist the attack of plants.

A supply of nitrogen is essential for plant growth. Some plants are able to manufacture their own nitrogen; others can obtain this nutrient from dust and raindrops. The most successful tropical colonists maintain a connection with the ground's supply of nitrogen by sending down long aerial roots. This strategy, by ensuring a constant supply of nutrients and moisture, is used by the largest ediphytes.

The most destructive weapon in a plant's arsenal is its roots. These find their way into microscopic cracks where the long process of leveling cities begins. Roots, even when they are small, develop tremendous hy-

A native of Asia, tree has become one of the most prolific urban invaders across much of the world.



In New York City, the ailanthus hugs walls of a ruin on Roosevelt Island—a smallpox hospital built in 1856.

draulic forces that enlarge cracks, separate bricks and lift concrete and blacktop. Over decades and centuries this can be a useful process: abandoned buildings are toppled and their man-made materials decomposed.

Although it takes generations to accomplish such feats, the relative speed with which plants can colonize new territory is amazing—as is their ability to disperse. Moss spores, for example, can take to the air in New Zealand and land in Alaska. The speed of development from spore to sprout may happen in as little as 30 minutes. Although they may appear to be dead for decades, mosses will survive long-term droughts and will quickly revive with the first rain.

The urban setting presents numerous opportunities for colonization. Building surfaces are niches for specialized species of ferns, grasses and other plants that are sometimes called "crack flora." Sidewalks and gravel harbor a "step-resistant" group that includes mosses and grasses well-adapted to constant foot traffic. Roads and railway beds are under steady assault by dandelions, thistles and mushrooms that slowly push dirt aside and buckle asphalt. Goldenrod, locust trees and other pioneers in temperate climates can turn an abandoned railroad yard or factory site into a field in five years.

One successful "carpetbagger" is the ailanthus tree that was introduced from Asia into Europe as an ornamental plant in the 18th century. After World War II, the ailanthus took possession of the bombed ruins of European cities. That same species now stands in silent testimony to the destruction of sectors of the city of Beirut.

The birch is another tree that is well-adapted to colonization in harsh environments. Birches were the first trees to grow on land denuded by the last Ice Age —a success due to their phenomenal reproductive

Donald Perry is a biologist and Sylvia Merschel is a free-lance writer. Perry's first book, Life Above the Jungle Floor, *was published last October.*

Artist Gary Rieveschl dropped goosefoot and grass seeds into the flagstone cracks to produce this artwork.

ability. Each tree can produce up to 90,000 seeds per square meter of crown area. The seeds are dispersed by wind over a three-month period, which is much longer than other temperate forest trees. Birches can turn even the most barren land into forest, eventually improving soil quality.

Plants have waged their war of reclamation for thousands of years, as long as Man has altered the planet's habitat for his needs. Prime examples of old battles—"lost" cities—are abundant in impenetrable, virgin jungle where indomitable vegetation can quickly wrest land from civilization's hold.

Deep in the jungles of Guatemala lie the extensive pre-Columbian ruins of the city of Tikal. It covers an area of six square miles and has spectacular temples and ceremonial architecture. At the city's height it was inhabited by close to 50,000 Maya, a deeply religious, industrious and agricultural people (SMITHSONIAN, May 1986). Tikal was initially occupied in 600 B.C. and mysteriously abandoned in A.D. 900. Although it was discovered in the 19th century, the city's limits have not yet been drawn because, as archaeologists range into the dense vegetation that overwhelmed the area, they have continued to find additional ruins. It is now thought that a vast region, including the Yucatán Peninsula all the way down to central Guatemala, was fully inhabited by the Maya at the height of their civilization.

"Lost" cities are not restricted to Central America. They have been found in Southeast Asia—Angkor in Cambodia is an excellent example—the Andes and tropical Africa. We know that much of the planet's tropics at one time or another supported civilizations, but the full extent of Man's habitation is only now beginning to be understood. Biologists have long thought that the Amazon basin and its vast expanse of tropical rain forest have never been disturbed by human activities. The validity of this belief, however, is being questioned by the studies of Robert Sanford, a tropical biologist from North Carolina State University. Sanford had been digging in tropical earth to uncover roots. It was while he was studying root growth and mortality that he unearthed layers of charcoal containing artifacts near San Carlos de Río Negro in the north central Amazon Basin. This was puzzling because it was previously assumed that humid Amazonian forests were not subject to fires. Sanford asked Pedro Fogon, a 60-year-old Baré Indian, what all the black stuff in the soil was.

Pedro said, "Don't you know, Doctor? This is from the fire at the beginning of the world."

After listening to hours of Pedro's recollections, Sanford began to suspect that the local stories about raging forest fires were actual accounts of historical events. He took samples of the charcoal to a carbon-14 dating laboratory and found that the fires occurred from 6,000 years to 250 years ago. At one site human involvement was deduced from the association of potsherds with the layers. One of these artifacts, found by Juan Saldarriaga, was given an age of about 3,750 years, more than twice the age of the earliest human artifact from the interior Amazon Basin. Sanford has found similar layers of ancient charcoal and artifacts in Costa Rican rain forests. His discoveries force us to reconsider the extent to which fires have affected tropical rain forests.

Today, when it is being predicted that tropical forests may virtually disappear from the planet by the year 2000, such findings at least remind us that jungles are vigorous and may be capable of withstanding even the worst assaults. The past, however, is no measure of future events. Today's civilizations with their chain saws, herbicides and sterile agricultural practices are an incomparable destructive force.

As a biologist, I must wonder if modern technology has finally overwhelmed nature's tremendous regenerative forces. It seems that a new era of evolutionary history has started where the dominant life forms will be Man and his domestic flora and fauna. I can only hope that we are not entering a time when wild things will be curiosities, relics of a forgotten age when the planet was populated by all manner of wonderful and inexplicable life.

Head of deity slowly crumbles as roots of strangler fig ensnare it in ancient Cambodian shrine at Angkor.

GM

Let's get it together . . . buckle up. Tires supplied by various manufacturers.

EVERY GARAGE SHOULD HAVE

AT LEAST ONE CHEVY.
CHEVROLET

By James R. Chiles

NASA's giant research balloons are out of sight

But at the Texas facility where launch and recovery operations are overseen, the budget is surprisingly down to Earth

When balloon (opposite) failed, insulated box holding telescope parachuted to safety, landing in a forest.

On a hot bright morning in May, three cars and a truck are rolling down an oily dirt road in the Piney Woods of southeast Texas. Suddenly, two-way radios crackle and a twin-engine plane flashes overhead just above the trees. The convoy halts, doors slam and men start gathering by the roadside. "Over that way," one of the men calls out, "maybe a quarter of a mile." He points to the east, into a thicket of saplings, low bushes and spiky tendrils that the local people call "whoa vines." It's an odd combination of men that starts into the brush: three riggers, five astrophysicists and an unemployed steelworker familiar with these woods who's stopped to lend a hand after seeing the activity on the road. They're on a scientific search-and-rescue mission.

"There's snakes in there, you know," says the steelworker's wife as I follow the group. "Deadly ones."

Five hundred yards and no snakes later, we find what we are looking for: a large white box nestled up against an oak tree (above) and attached by steel cables to a big parachute. It's a one-ton cosmic gamma-ray telescope, landed by parachute after a short flight into the stratosphere via balloon.

Dozens of scientific payloads like this go up every year and come down in remote areas across the country. Working under contract to the National Aeronautics and Space Administration, the University Corporation for Atmospheric Research runs the National Scientific Balloon Facility (NSBF), located near the East Texas town of Palestine. In its 24 years this low-budget operation has sent up more than 1,500 balloons.

During a critical moment of launch, research balloon carrying gamma-ray telescope mushrooms and rises.

The balloons are economical gasbags (made of microthin polyethylene film) up to 800 feet long, using helium to tow clusters of instruments above 99 percent of the Earth's blanket of air. They're much bigger and rise much higher than weather balloons or sporting balloons. A balloon's maximum altitude of 30 miles is just one-quarter as high as the lowest satellite orbits—and a balloon can't stay up nearly as long as a satellite—but all the same it's well suited for atmospheric research, training fledgling scientists, field-testing experiments intended for satellites or shuttles, scooping up micrometeorites and other uses.

The stratosphere at a balloon's cruising height is important to scientists for several reasons. Up there, complex chemical reactions replenish the ozone that shields our skin from most of the sun's powerful ultraviolet radiation. Balloon-mounted research is continuing on what effect man-made pollutants are having on this ozone factory. Also, the air is so thin and dry that the sky is always black above and full of stars that are as sharp and brilliant as needle points. Surprisingly large reflecting telescopes, stabilized with gyroscopes, can make highly detailed studies of infrared radiation from the sun and stars. Other "telescopes" made of interleaved film, plastic and lead re-

After following new trail bushwhacked by bulldozer, recovery team hoists boxed telescope onto truck.

cord showers of cosmic rays—high-energy, subatomic particles that constantly bombard the Earth. Some cosmic rays are millions of times more powerful than anything that earthbound particle accelerators can provide; physicists are studying their collisions with the detectors to identify the fundamental particles and energies making up the atomic nucleus—the elusive "quark-gluon plasma."

It would be difficult to tell at a glance that the NSBF is a stepladder to the stratosphere. It's a cluster of white buildings on either side of a farm road northwest of Palestine. It operates on a $7 million annual budget, which is about one-eighth the cost to launch a single Delta booster rocket. Here, 70 permanent employees provide all the services a scientist requires to put his package in the sky: they rig the cables and parachutes, purchase the balloon and helium, launch and track the flight, and bring the payload back to the base from wherever it happens to land. That might be as far away as either coast.

The Palestine base is busiest during two periods each year: several weeks in both spring and fall. Most of the year the stratosphere is so windy that speeds higher than 120 miles per hour aren't unusual. But in the spring and fall "turnaround," the stratospheric winds change direction, calming nearly to a standstill. Scientists launching balloons during this window in the conditions can expect their payload to stay within a few hundred miles of the base for a day or two at a time.

But it's by no means a sure thing that any balloons will go up during the turnaround. Many more factors work to scrub a launch than to encourage it. For example, surface winds must be mild; the weather where the payload is expected to come down must be good; the balloon cannot be allowed to rise over a densely populated area during climbout; and, finally, the balloon may rip during launch or during ascent.

However, unlike the failure of a Delta or Titan booster, in which the payload is usually destroyed, a balloon failure just releases the scientific package on its parachute. A plane tracks the descent, and recovery crews fish the payload out of the woods or pasture, using the same rough-and-ready techniques as for a successful flight. Back at the base, scientists pound out the dents and check the wiring, and the payload goes back up on the next available balloon. It's a forgiving technology. Scientific payloads launched from the Palestine base seem to include more parts from hardware stores than from aerospace contractors.

After several reconnoitering visits to the base in the late winter, I decide the best way to experience the unpredictable life of the balloonist is to follow a scientific launch from preparation through recovery. My chance comes in mid-May, during the spring turnaround. When I arrive before dawn on a Monday morning, the base is preparing for three possible launches that day. One of them is for five scientists from the University of California, Riverside.

The Riverside scientists have set up a laboratory-away-from-home in a cavernous room attached to the four-story building that houses the balloon base's control room and weather station, and they'll be here till

With the payload rescued, the Riverside scientists and NSBF recovery crew turn to the task of removing parachute, which had lodged in branches (left); lines (above) lead from harness to tree that was later felled.

the flight is finished or cancelled by weather. Using a rental truck, they've brought along the gamma-ray telescope, as well as a large computer including printer and terminals and tape drives, oscilloscopes, stacks of file cabinets, bookshelves, workbenches and tool cabinets, a navigational receiver and an atomic clock now sitting on a wooden crate. Folding tables and a motley collection of old swivel chairs and folding seats accent the functional decor.

In the Riverside group are two professors, one research physicist and two graduate students. All are wearing tennis shoes or sandals, and Saturday-casual clothes. Stephen White, who started flying an earlier model of gamma-ray telescope in 1975, has a gentle manner and a slight build that complements the bigger frame and more boisterous style of his fellow professor Allen Zych. Tumay Tumer, Turkish by birth and educated in England, specializes in gamma-ray research at the university. Bill Sweeney and Terry O'Neill are pursuing their doctorates.

Looming over all the scientists and their equipment, hanging from a hoist at the rear of the chamber near a huge sliding door, is a white box somewhat bigger than a child's playhouse. It's the gamma-ray telescope. But there are no lenses or mirrors inside because gamma rays would pass right through them.

White explains that arrays of photomultiplier tubes —instruments that measure the amount of gamma rays entering the telescope—at the top and bottom of the box will note the excitation in two layers of detectors caused by the arrival of gamma rays. The timing and intensity of the excitation will fix the source of the rays in the sky within a few degrees and reveal how much energy they carried. This information will be radioed to the base and stored on magnetic tape.

The scientists started building the telescope four years ago. They first brought it to Palestine last fall, but were unable to launch due to bad weather. Today looks very good, though—sunny and calm—and an evening launch is scheduled. By midafternoon they're moving tables and boxes away from the telescope and at 4 P.M. the big doors slide open to reveal that a white, 52-ton contraption labeled "Tiny Tim" has pulled up outside. Tim, a specially designed launch vehicle with eight-foot tires, will take the payload out to the launching pad and will release the payload at the precise moment the balloon billows overhead.

As a hoist transfers the suspension cables to Tim's grip, the Riverside team sees a few gaps in the box's urethane foam insulation and patches them with white tape. The foam is the same kind you might insulate your greenhouse with. This kind of make-do approach is common among scientific-balloon users because balloon flights aren't man-rated (they don't require the level of safety precautions necessary for human passengers), and another one can usually go up later if something malfunctions. Bob Perrin, electronics technician at the base, spurned a $30,000 video camera rated for high altitudes and modified a $200 security-type camera for the job—using bathtub caulking to do the extra electrical insulation required. A Caltech gamma-ray telescope used eight home videocassette recorders to

Scientists must insulate instruments to prevent freezing in subzero temperatures of stratosphere.

collect data. When a group of cosmic-ray scientists at Palestine needed metal shields for photomultipliers on their experiment a few years ago, they cut empty Old Chicago beer cans to fit.

Telescope held high, Tim backs gingerly out of the building and sets off for the launch pad a quarter-mile away. This pad is little more than a large round parking lot on the top of a gently sloping mound. Paved spokes, radiating out from it, connect the pad to an outer ring road a half-mile in diameter.

After the weather passes another test, in which base meteorologist Danny Ball tracks the rise of a small pilot balloon, the rigging crew begins preparing the package for launch. The crew connects the payload to an opened parachute with steel cables. That parachute points at a big wooden crate on a trailer several hundred feet away. Inside that shipping crate is the balloon. When fully expanded at the planned altitude of 130,000 feet, this one will hold 34 million cubic feet of rarefied helium. With a little stretching, that's enough to fill 168 Goodyear blimps.

A balloon this size requires about 17 acres of special, high-grade plastic and costs $40,000 to $60,000. A small flaw or careless tear in the plastic—which is only the thickness of a dry cleaner's garment bag—during handling can start a rip that will later bring the entire rig to Earth. Two phases of this flight will be tough on the gasbag: the launch and the passage through the "tropopause" about ten miles up. The tropopause is a boundary layer leading to the stratosphere; temperatures can drop to –100 degrees F while wind shear shoves each end of the balloon in different directions.

At half-past five, out on a spoke road pointing south from the launch pad, four men from the balloon-rigging crew begin laying the balloon out on a tarp, removing a red protective cover. Another man unrolls helium hoses from a semi-trailer (opposite). Meanwhile, on a hill overlooking the launch pad, a small jovial crowd gathers, composed of scientists from two other groups waiting their turn to launch later in the week. One group is from Harvard and the other is from Utah State University.

Barry Welsh, of the Utah group, has been in ballooning since 1974, first with the University College of London. "Balloons are such a good way of testing space instruments," he comments in a British accent. "You can build them in a couple of years and launch them for a couple of hundred thousand dollars. A shuttle launch costs a minimum of a couple of million and it's five years before you see results." In the past 70 years balloon-borne experiments have brought back

The author, who is a frequent contributor to these pages, wrote most recently on counterfeiting (July 1986) and flight simulators (June 1986).

the first evidence of all the major cosmic-ray particles and antimatter particles, and the first detailed photographs of the sun's surface.

Scientists like Welsh come from all over the world to move into Palestine motels during the turnaround seasons and give the town a unique cosmopolitan flavor. Welsh says of the private clubs in town, "You don't have to join if you say you're from the balloon base or if you come in with an English accent." He remarks that three men from his old London group married Palestine women during their long waits in the area.

"I was here in 1982 for 67 days and we got one launch. I was pulling my hair out," he adds.

When the filling begins it's not easy to talk because helium shrieks from the hoses into the filling ducts with a whine worthy of a jet fighter accelerating under full afterburner. The helium comes from gasfields in the Texas Panhandle and southwest Kansas—two major locations in the Free World where it's currently available. It will take about $8,000 worth to fill the balloon to one-half of one percent of the rated volume. That's enough lift to get it off the ground with the 3,000 pounds of telescope, ballast and rigging. The low air pressure at maximum altitude will swell the slim balloon to full size, a bloated-teardrop shape.

Warning off any passing aircraft

A bungalow-size bubble of helium quickly takes shape at the end of the balloon, pulling it upward. Over the next 40 minutes of additional filling, a spool mounted on a large tractor keeps the bubble from dragging the rest of the balloon after it.

Shortly after 7 P.M., the whine stops and the launch crew ties up the filling ducts while the control tower notifies the Federal Aviation Administration of the launch. The FAA will divert any airliners passing overhead. As if in defiance of that precaution, a rainbow-striped ultralight airplane from the Palestine airport flies over to buzz the launch pad. But fortunately it wanders off a few moments before Grady Cole, the launch chief, signals a crewman to pull the steel arm that releases the spool. The inflated part of the balloon flops into the air with a "whoomp"—briefly assuming a mushroom shape—then quickly pulls up the unfilled portion as it rises (p. 82). A few seconds later Tiny Tim is maneuvered to stay under the straining balloon, and Tim's red jaws open to release the gamma-ray telescope. It dips toward the pavement, scrapes, then rises quickly.

As if beckoning this flight upward, another balloon is visible many miles off to the northwest, serenely cruising the stratosphere. Through binoculars it becomes as a ghostly blue-white bulb with four tubes hanging down like spindly legs. Launched earlier to-

In NSBF control room, staff members track and plot flight using information radioed from the balloon.

Helium is fed into balloon; at full altitude, the gas will have expanded to 283 times its original volume.

NSBF engineer examines balloon film—about as thick as a dry cleaner's bag—recovered after a flight.

Waiting for suitable launch weather, scientists from Jet Propulsion Laboratory play with a hobby plane.

day, it carries a cosmic-ray detector. The Riverside balloon heads in that direction as it enters another air layer. It passes over the base again and moves toward Lufkin, a logging and farming town to the southeast. The kibitzers disperse back to motels and amusements.

It will be a long night for the Riverside group, though. They drive back to the control building, to their computerized gear. Over the next day or two they plan to study several targets known to be good sources of gamma rays. One is the Crab Pulsar, associated with the Crab Nebula—the shredded remnant of a supernova that occurred in A.D. 1054. Another is the strange object called Geminga, in the constellation Gemini. Geminga is a powerful emitter with a "checkered" history," says White. Various observers haven't been able to agree on its key features and haven't been able to locate it definitely in any other wavelength.

Things will be slow for the next three hours, until the balloon reaches float altitude 24 miles up. Tumay Tumer sets up an eight-inch amateur telescope in the parking lot for anyone curious enough to watch the balloon climb through the clear evening air, now pink-tinted with approaching sunset. By 8 P.M., the scientists are occupied with their equipment inside and I'm alone with the telescope. The balloon is now past 50,000 feet and is nearing the cold and turbulent tropopause, so I keep my gaze focused on the slowly swelling bag. Even at a distance of 50 miles, it's still possible to see all of the large features. The balloon, cables, parachute and payload make a string almost a thousand feet long.

At a few minutes past 8, the balloon makes a quarter-turn clockwise, and through the shimmering air I notice a slight bend developing between the top and bottom of the envelope; I make a note that it's getting windy up there. Two minutes later I watch in shock as the top of the balloon starts shedding great hunks of plastic. It's bursting. In just seconds, the destruction eats downward. As the rig plummets, it leaves an irregular trail a mile long of hundreds of white scraps. The orange-and-white parachute separates from the wreck above and puffs open, slowing the payload.

The control tower notifies the Riverside group a few seconds later over the intercom. After a pause for stunned disbelief, they turn to a monitor on the wall that shows the location and altitude of the payload. A ripple of alarm spreads when an early fix from Don Gage, the NSBF pilot making circles below the balloon in a leased twin-engine Cessna, raises the possibility that the payload will come down in Sam Rayburn Lake, 70 miles southeast of the base.

On a normal flight, after the controllers decide they want the flight ended, Gage has a great deal of control over where a payload will come down. Consulting with the base meteorologists by radio, Gage—a crack pilot who learned his maneuvers in combat over Vietnam—can usually estimate within a square mile or so where a parachute will land. The ideal spot is a clearing near a road in a sparsely populated area. When he's satisfield, he will terminate the flight from his airplane by using a radio signal to fire a small charge that frees the parachute and payload from the balloon. But tonight the payload will find its own landing; the only thing the base can do to influence the landing is to send radio signals releasing all or part of the steel-dust ballast carried underneath the telescope.

A tough choice with little time to spare

The scientists gather at a large airman's map spread out on a folding table. "We have a choice," Tumer says to me after more information comes down from the control room. "Land on ballast or land in the lake." Tumer and Sweeney disagree briefly over whether the package would float. Even floating, a package weighing more than a ton would be difficult to recover. And it's important to get the payload back to the base quickly because there is the chance that—if the telescope can be fixed up—the group might be able to go up again in the few precious days remaining in the spring turnaround.

Leaving the ballast on to ensure a ground landing, though, will mean a higher impact rate than normal. This is worrisome, Tumer comments, because the bottom of the telescope contains 13 sodium iodide bars so delicate that three identical bars were cracked and ru-

BOOK '87 AT '86 PRICES!

SUPEREUROPE

SUPERLINER QE2 ONE WAY. SUPERSONIC CONCORDE THE OTHER, JUST $699 EXTRA.

Now Cunard makes it possible, actually irresistible, to experience the ultimate transatlantic travel combination—one way on Queen Elizabeth 2, the other way on British Airways' supersonic Concorde.

From May through December, sail either way, fly a specially reserved Concorde the other—between London and New York, Miami or Washington, D.C. Just $699 extra per person—about 70 percent off!

Queen Elizabeth 2, Tomorrow's Superliner Today.™
QE2 resumes service in May, following a six-month, $150-million transformation: an all-new Sports Centre and outdoor Jacuzzi® Whirlpool Baths; lavishly redone restaurants featuring dinner dancing and an International Gourmet Bazaar; an all-new arcade and international luxury boutiques; an expanded IBM Personal Computer Centre and a new Business Centre for executives; and 20-channel satellite TV capability. With all this and more—a complete casino, disco under the Magrodome and free access to the famed "Golden Door Spa at Sea"® with gym, saunas and swimming pools—QE2 is truly Tomorrow's Superliner Today.™

Low-cost Concorde or no-cost British Airways economy fare.
Fly Concorde for just $699 extra. Or enjoy free British Airways economy-class airfare between London and 57 North American gateways. (You may, of course, upgrade yourself to Club Class or First Class by paying the difference.) Cunard offers savings on European hotels; on cruises in Europe on QE2 or Vistafjord; on land tours; even on the fabled Orient Express.

Book 1987 now and save!
Make your deposit by Jan. 31 and enjoy 1986 rates: five glorious days and nights, $1,350 to $7,195. Contact your travel agent or Cunard.

Rates per person, double occupancy, dependent on availability and departure date. Free BA economy ticket based on rates as of 8/21/86; length-of-stay restrictions apply. Cunard reserves right to cancel Concorde or change rate without notice. QE2 registered in Great Britain.

QUEEN ELIZABETH 2
Tomorrow's Superliner Today™

Cunard, Box 999, Farmingdale, NY 11737.
Rush me, free:
☐ *QE2's SuperEurope '87* (Q900).
☐ *Vistafjord/QE2/Sea Goddess Cruises in Europe* (Q872).

NAME

ADDRESS APT. NO.

CITY STATE ZIP

MY TRAVEL AGENT E17001

CUNARD

© 1986 CUNARD

QUEEN ELIZABETH 2 ▪ SAGAFJORD ▪ VISTAFJORD ▪ SEA GODDESS I ▪ SEA GODDESS II

ined merely during shipping by air freight. There are no more immediately available to replace any broken by the landing. The controllers upstairs have to balance all these pros and cons quickly because the payload is descending at about 1,300 feet per minute. They decide to aim for land. Twenty minutes later, the position numbers on the monitor go to zero. The payload is somewhere on the surface. But where?

Don Gage has seen the landing and marked it on his map. He will land and spend the night in Lufkin, more than 70 miles from Palestine, and guide the recovery crew and scientists to the site in the morning.

Failures like this one are the subject of much scrutiny at the balloon base these days. The large balloons have been failing often enough in recent years to persuade NASA to appoint a "Tiger Team" of experts to coordinate research on a solution.

Harvey Needleman, branch head of the balloon program for NASA, explains that after polyethylene replaced rubber-coated cloth following World War II, scientific ballooning profited from trial-and-error engineering that somehow produced film and heat-sealed seams strong enough to take stresses and temperatures much harsher than anything commercial-grade polyethylene is designed for. But at the same time, payloads were getting bigger and pushing the plastic's strength to the limits.

This year's research program is analyzing precisely how a good balloon plastic is made and what it should do, and "has been going really well," says Keith Hazlewood, head of the NSBF's engineering department. "We're looking for successful films from two manufacturers so we'll have competitive bidding. It's too early to tell whether the program is completely successful, but we haven't had any surprises. We do expect the failure rate for payloads below 5,000 pounds to come back within historical bounds."

At 5 the next morning, under a predawn sky brilliant with no fewer than six planets, the Riverside group meets two of the balloon base's riggers outside the control building. The riggers will be driving a white crane truck following a trailer. The Riverside group will follow in two cars and I'll follow them.

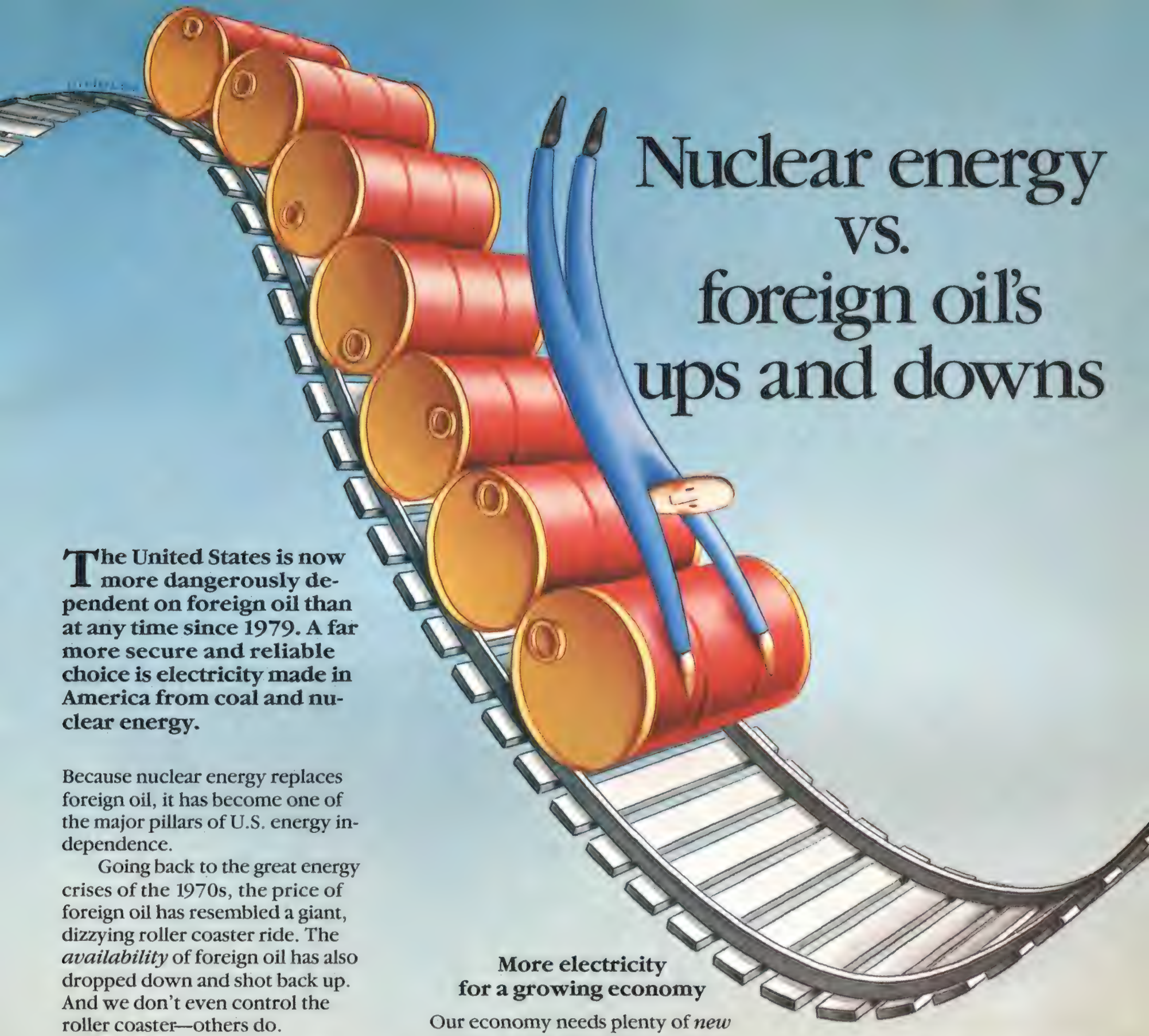
Our convoy makes a breakfast rendezvous with pilot Don Gage at a restaurant in Lufkin. Low-lying clouds are keeping Gage and his twin-engine at the airport, so the scientists decide to go on ahead and try to locate the balloon from the ground, using Gage's directions. His landmarks lead us down dirt roads into dense piney woods ten miles southeast, and it's immediately obvious that we can't see more than 50 yards into the tangle. I split off from the group to try a different road, stopping occasionally to ask residents if they've seen a big parachute in the neighborhood. One family has already heard of the landing on the local TV news and is eager to join the hunt.

But shortly afterward the weather clears and Gage roars overhead, ending the uncertainty. Using the parachute as a guide—it is draped atop the tall pine trees—he directs us to the payload. It slid down the side of a tall oak tree growing on a slight incline, broke off a five-inch limb and crunched down on its cardboard shock absorbers so straight and plumb that a carpenter's level couldn't make it any more horizontal. The only visible damage is a dent in a metal tank on one side and a few gashes in the white paint. Joe Taylor, the chief rigger on the job, reports back to the base and requests permission from the U.S. Forest Service—which appears to own this land—to recover the payload and parachute. As the riggers get their chain saws ready, I can almost hear those trees shivering.

Hand-carrying payloads out in pieces

Of all the offbeat things about scientific ballooning, the side that produces the most anecdotes is certainly the recovery phase. The NSBF has launched from sites in South America, Australia, Canada and Sicily, as well as Texas, and every location has its set of peculiar challenges. Payloads have come down on mountainsides, in table-flat deserts and on virtually every other kind of terrain between. The crews have hand-carried some payloads out in pieces; they've hired boats and trucks and sometimes helicopters—but the last can be unwieldy, as well as present logistics problems better solved by other types of recovery vehicle. Even the collapsed balloon needs attention: the men are under strict orders to see that the heap of plastic is properly disposed of before they leave because cattle will imprudently eat it and "bind up." The most prized qualities of a good recovery team, typically just two riggers and a scientist or two, are ingenuity, persistence

Nuclear energy vs. foreign oil's ups and downs



The United States is now more dangerously dependent on foreign oil than at any time since 1979. A far more secure and reliable choice is electricity made in America from coal and nuclear energy.

Because nuclear energy replaces foreign oil, it has become one of the major pillars of U.S. energy independence.

Going back to the great energy crises of the 1970s, the price of foreign oil has resembled a giant, dizzying roller coaster ride. The *availability* of foreign oil has also dropped down and shot back up. And we don't even control the roller coaster—others do.

Consider this ominous statistic: in the first half of 1986, even at today's low prices, America had to pay over $20 billion for foreign oil. That's a lot of dollars leaving this country, adding to an already huge trade deficit.

Nuclear energy cuts oil imports

Clearly, the more energy we use in the form of electricity from coal and nuclear energy, the less oil we have to import.

Nuclear-generated electricity has already saved America over two billion barrels of oil, with billions more to be saved before the turn of the century. That's why it's so important for our energy self-reliance.

More electricity for a growing economy

Our economy needs plenty of *new* electrical energy to keep on growing. Almost all of that new energy is coming from coal and nuclear electric plants.

The truth is that nuclear energy is an everyday fact of life in the U.S. It's been generating electricity here for nearly 30 years. Throughout the country are more than 100 nuclear plants, and they are our second largest source of electric power. As our economy grows, we'll need more of those plants to avoid even more dependence on foreign oil.

Safe energy for a secure future

Most important, nuclear energy is a safe, clean way to generate electricity. U.S. nuclear plants have a whole series of multiple backup safety systems to prevent accidents. Plus superthick containment buildings designed to protect the public even if something goes wrong. (It's a "Safety in Depth" system.)

The simple fact is this: America's energy independence depends in part on America's nuclear energy.

For more infomation, write the U.S. Committee for Energy Awareness, P.O. Box 1537 (RC7), Ridgely, MD 21681. Please allow 4-6 weeks for delivery.

Information about energy America can count on

U.S. COMMITTEE FOR ENERGY AWARENESS

Truck used for launch of smaller payloads is an old military vehicle that was converted for use at NSBF.

and the ability to obtain the help of local people.

Before long, Forest Service personnel start arriving and discussions are held over the forestry map. Don Gage arrives in a rented car and, as the senior base employee here, takes charge.

Meanwhile, the riggers discuss how to get 2,100 delicate pounds out of the soggy woods with minimum damage to trees (which the Forest Service will charge the base for). The ground is too rough and wet, and the woods too dense, for the crane truck to just drive in. The equipment problem is solved when an unemployed steelworker watching the action summons a friend of his who owns a bulldozer idled by the slowdown in the Texas oil economy. The pair lobbies Don Gage for the work and Gage takes them on. The operator—an energetic fellow named Elton Cryer who has been running dozers since age 16—barrels off in his dual-wheel pickup and the rest of us swat mosquitoes.

By midafternoon Cryer returns with a small yellow dozer on a trailer. The sleepy scene is transformed. Cryer has promised to clear a path into the payload in 90 minutes and will follow an old logging trail for part of the way; he cranks up his machine, backs off the trailer with a bump and barges into the vegetation. Swinging down the puddle-spotted trail behind him are the crane truck with its trailer and an old four-wheel-drive pickup just arrived from the base.

Exactly 90 minutes later, the dozer has cleared a circuitous path to the package, overcoming thick shrubbery, a lot of saplings and a couple of medium-sized pines. The number of people in the woods has been rising steadily—there are more than two dozen now—and Gage has his hands full keeping gawkers out from under bulldozer treads and falling trees.

After the crane hangs up briefly while trying to get close enough to use its boom, Cryer yells out to rigger Joe Taylor, the truck driver: "Hey, I got a ten-year-old boy to come drive that thing if you can't handle it!" The crowd guffaws appreciatively and Taylor replies with a burst of power that gets him out of his difficulty. By 5 P.M. the payload is on the trailer and the Riverside group is bolting it to a wooden framework. The riggers turn their attention to the big orange-and-white parachute, which is draped across the tops of three tall trees (pp. 84-85).

Recovery crews make every effort in bringing the expensive parachute back for mending and reuse. Sometimes it's just a matter of yanking it loose from a few shrubs and rolling it into a ball, but this one is far too tangled for muscle power to do any good, so the riggers attach a chain from the dozer to its harness and start dragging it out with diesel power. Limbs whip and crack, leaves fall, nylon shroud lines part with sounds like gunshots, and eventually the chute is cornered in one 70-foot pine tree. The crowd moves back and Taylor closes in with a chain saw; the tree crashes down just minutes later. It's obvious he knows his way around a woodlot.

By 9 P.M. the payload is safe at the balloon base. The Riverside group begins its repair work the next morning, a Wednesday. By Saturday evening, after many hours of overtime, the gamma-ray telescope is patched up and ready to fly again if surface weather is good during the few days of the turnaround remaining. And, amazingly, the weather holds. The telescope goes up aboard a test flight launched three days later. That balloon survives the tropopause, and the telescope gets the better part of a day of observations before it parachutes down near Waco, Texas. By the following weekend the group has packed up and gone home. Stephen White estimates it will take a year to analyze the observations. O'Neill and Sweeney, he says, should have enough data for their doctoral dissertations.

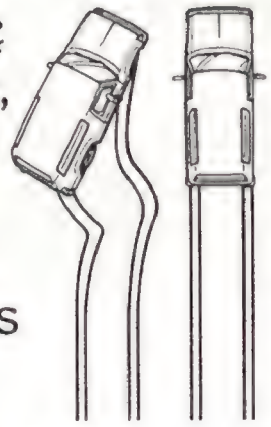
For the Riverside scientists and many others—particularly as long as our space program remains stalled by booster problems—the good-old-boy network of scientific ballooning gets the job done well enough. Not all launches go up on schedule and some may come down in the swamp when a balloon goes bust, but the next flight is only a truckload of helium, a calm day and a big gasbag away.

Research team from Caltech prepares 3,100-pound gamma-ray imaging telescope for debut balloon flight.

Slip into something comfortable.

The 1987 Ford Bronco II is here.

Now Bronco II is even more versatile! For top performance, a 140 hp* V-6 is standard. So are new rear antilock brakes. And there's a choice of a new 2-wheel drive model as well as traditional 4-wheel drive.



5:38 p.m.

The work day's finally over!

As you walk across the company parking lot, you spot your Eddie Bauer

Eddie Bauer®

Bronco II waiting for you. Pop open the door and ahh...slide into your Captain's Chair, with its commanding view of the road. Adjust the tilt wheel just right and feel the comfort and luxury of your Bronco II's high-style interior. Now you've *really* slipped into something comfortable!

Start your engine.

Turn the key. You just brought the Bronco II's 2.9L electronically fuel-injected multi-port V-6 engine alive. This powerplant is unbeaten by any standard engine in its class.

That's the brakes.

First stop is the florist. Pull out smartly into traffic. Wait... *hit the brakes!* Where did that puppy come from? Extra glad the Bronco II has rear antilock brakes. They help you make straight stops when operating in 2-wheel drive.

4-wheel drive detour.

Freeway traffic looks pretty bad. You should try this side road. Uh-oh—mud! Oh well, the Bronco II can handle it. Just press the optional electric "Touch-Drive" button and your Bronco II transforms to a 4-wheel-drive machine—ready to give you the traction to ease through mud and snow. No stopping. No shifting. (Ford also offers a Bronco II 2-wheel drive model.)

It fits right in.

Everyone in town must be shopping at once. Good thing the Bronco II is small and compact. Yet, it's still large enough to carry all our camping equipment for the weekend. And the Eddie Bauer Bronco II comes with the "Ford Care" extended service plan**—24 months or 24,000 miles, whichever comes first. With 2 Captain's Chairs, there's only one problem you may have with Bronco II—deciding *who* gets to be captain and who's co-pilot!

Free air conditioning.

Free air conditioning is available when you buy any Bronco II Special Value Option Package. The option content varies with your choice of package. The savings are based on the manufacturer's suggested retail price for the Special Value Package compared to traditional suggested pricing for the options purchased separately.

Best-Built American Trucks six years running.

"Quality is Job 1." In fact, for the past six consecutive years, Ford quality has led all other American automobile companies. This is based on an average of owner-reported problems in the first three months of service on '86 models and in a six-month period on '81-'85 models designed and built in North America.

Buckle up—together we can save lives.

*Based on SAE standard J1349.

**Limited warranty. Ask to see a copy at your dealer.

Bronco II
Ford

By Bryce S. Walker

Tales of sunken gold and hunters of the depths

Riches reached Spain by the galleonful, changing her economy, but enough went down to make diving for treasure a way of life

First great haul, 25 tons of silver from a Spanish wreck, was brought back by William Phips in 1687.

Not since the glory days of Queen Elizabeth could anyone remember such a triumphant—or profitable—return. It was the year 1687, and the 200-ton *James and Mary,* paint flaking and lines worn thin from a nine-month voyage to the West Indies, lay berthed at the Royal Dockyard near Greenwich, her hatches flung open to reveal the astonishing cargo. A crowd of nobles came down from London to watch as the deckhands hauled it out—sack after bulging sack, each one of them containing a small fortune in Spanish silver coin plucked from the coral-encrusted timbers of a wrecked Spanish galleon.

The hero of the moment was a bold giant of a man from Colonial Maine: William Phips, captain of the *James and Mary,* who had brought the treasure home. Phips, on hand for the unloading, strode the quayside wearing a new gold hatband and gold neck chain a yard long as officers from the Royal Mint weighed each sack. There were 68,511 pounds in all, more than 25 tons of silver, along with great handfuls of gold and gemstones. Silver was a good deal more valuable then than now. The cargo's modern worth is almost impossible to calculate: $20 million? $40 million? It was the richest trove of sunken treasure yet recovered and it started a rage for underwater treasure hunting that has continued off and on right up to the present.

"The money fished up has caused great excitement," reported the Florentine ambassador, "and has awakened the spirit of many to engage in similar enterprises." Stock companies were formed and salvage boats commissioned. The astronomer Edmund Halley, who later calculated the orbit of his famous comet, invented a new type of diving bell. During the next decade, so many expeditions set out that the young Daniel Defoe, long before he ever thought of Robinson Crusoe, turned his mind to shipwrecks and their recovery. "Bless us!" he exclaimed, "that Folks should go Three thousand Miles to Angle in the open sea for Pieces of Eight!" The odds against success, he pointed out, were about "a Hundred Thousand to One."

Sonar devices and sand blowers

The odds for today's treasure salvors are somewhat better. Painstaking research into the Archive of the Indies in Seville, the cluttered repository of Spain's colonial trade records, now reveals the names and contents of each ship that went down. All kinds of ultrasensitive metal detectors, sonar devices, heavy-duty sand blowers and dredging mechanisms aid in locating wreck sites and bringing up their riches.

Every so often someone makes a hit. The summer before last, Key West treasure diver Mel Fisher came upon the main silver cache of a 550-ton galleon, *Nuestra Señora de Atocha,* which sank in a hurricane

Illustrations by Arthur Shilstone

Using forced labor, the Spanish conquistadores had gold and silver mined and hauled to seaports.

off Florida in 1622. Just last month the discovery was announced of *Nuestra Señora de la Maravilla* in only 30 feet of water off the Bahamas, with treasure, from 1656, estimated as high as $1.6 billion.

In Fisher's case, he had been searching for more than 15 years for this particular hoard, spending millions of dollars of his own and borrowed money, fending off legal challenges from the Securities and Exchange Commission and the State of Florida, not to mention rival treasure seekers. Some years he would net a pile of silver bars or a few gold trinkets or perhaps a 17th-century iron cannon or two (SMITHSONIAN, October 1983). Other years he found nothing. Then in July 1985 he discovered the galleon's strong room. So far he has hauled up 1,040 silver bars and 2,900 uncut emeralds in what may prove to be one of the richest finds in all the centuries of treasure salvage.

Plenty more remains. The Spanish had come to America with cutlasses and Bibles "to bring light to those in darkness," as Hernán Cortés' chaplain, Bernal Díaz, put it. But in 1522 Cortés, after marching into Mexico, loaded up a warship with captured Aztec gold, and Spanish galleons systematically began ferrying the riches of the New World back to Europe.

Soon new and even richer sources of wealth appeared. Spanish explorers trekking through the high Andes in what is present-day Bolivia happened upon a 15,000-foot peak that seemed to consist entirely of silver. The extraordinary Potosí mines rapidly stood revealed as the richest lode of silver ore the world had ever known. Other silver strikes followed in the hills north of Mexico City. Crews of Indians were put to work digging, refineries and mints were set up. Thereafter at least 85 percent of the treasure shipped to Spain was silver coin or bullion.

Millions of ducats' worth by 1550

More than half a million ducats' worth left the colonies for Spain in 1543, perhaps three times that much in 1550 and still more in the succeeding years—ton upon dazzling ton of the stuff. By the mid-17th century an estimated 1.3 billion ducats' worth of treasure had been shipped off to Europe, and another two billion to three billion more would arrive before shipments ceased, in the late 18th century.

Just what these values mean today is anyone's guess. People with a head for figures, when tempted to convert old coinage into modern values, face some bizarre conundrums of comparative time lag. How many ducats would it take to buy a $50,000 Mercedes? Or how many 1987 dollars for a prince's coach and four? Is a bowl of peasant's gruel the legitimate equal of a McDonald's hamburger? Suffice it to say that historians put the grand total of all treasure shipped to Spain as

high as $60 billion. This is somewhat less than the value of the U.S. Government's gold reserves at Fort Knox, but not a whole lot less. In the 16th and 17th centuries it represented a dangerously large portion of Spain's whole monetary wealth. One out of every four coins circulating in Europe in the 17th century, experts think, was minted from Spanish-American silver.

Much of this treasure took the form of oddly shaped silver disks called *reals de a ocho*: pieces of eight. Each one was worth eight Spanish reals, or three-quarters of a ducat. Often crudely stamped, seldom precisely round, they nonetheless reigned for centuries as something like the world's common currency. A traveler could have paid his way with them in Boston and in Constantinople, in Manila and in Madrid, and even, later on, in Daniel Boone's backwoods. The Dutch launched ships with them, pirates like Henry Morgan stole as many as they could, George Washington would have paid his soldiers with them (except he rarely had any), and the Habsburg kings of Spain flung them about by the hundreds of millions to help defray the costs of empire. So many began to circulate that they changed the very nature of Europe's economy.

The first silver finds occurred when Europe was experiencing a severe cash shortage; there was simply not enough coin available to pay wages or buy goods. Spain was particularly hard up. Her few industries—mostly textiles, arms making and leather-goods manufacture—had barely enough ready cash to operate. Spain's monarch was also the Holy Roman Emperor Charles V, with huge personal fiefdoms in France, Italy, Austria and the Netherlands. Empires, even the Holy ones, have always been costly. Spending a great deal of his time leading troops into battle and in casting about for funds with which to pay them, Charles fell deeply into debt.

The silver shipments reversed all this—for a time. Industries thrived, commerce expanded and Charles was able to support his regiments. But in nations as in individuals, sudden new wealth works odd changes. As pieces of eight in seemingly endless supply poured in, the Spanish found it easier to shop abroad than to make do at home. Wheat from Sicily, wool from Flanders, manufactured goods from France and England flooded local markets. Once again, Spain's industries languished. And while a few entrepreneurs grew rich —the chief of the treasure fleet made a lordly 8,000 ducats in salary—the poor got steadily poorer. A fifth of all Spaniards came to live on the edge of starvation.

But, with silver flowing through his seaports, Charles lavished even greater sums on imperial wars. Before long he was more seriously in hock than ever.

Bryce Walker wrote The Armada, *a book about great early Spanish sea battles.*

Spanish silver coins, *reals de a ocho* (pieces of eight), virtually became the world's common currency.

It seems astonishing: one-fifth of each gold consignment went automatically to the Crown, with the rest being the property of merchants, plantation owners and other private individuals. But the King seldom saw any of it. No sooner did a treasure ship drop anchor than his creditors from Germany and Italy seized the royal fifth. His interest payments alone ran as high as 40 percent. His principal bankers, the Fugger family of Augsburg, grew so rich that they lived better than most princes. Yet when Charles quit the throne in 1556, he left a state deficit of 20 million ducats.

His son, Philip II, had wars to fight with the French, the Dutch, the English and the Turks, as well as an enormous palace-monastery, El Escorial, that he wanted to build outside Madrid. Three times during his reign—in 1557, in 1575 and again in 1596—Philip had to declare bankruptcy. At least once he impounded all the privately owned silver in the annual shipment, about 1.6 million ducats' worth.

Heavy-laden treasure fleets had two routes in the New World, the one from Cartagena and Panama on, the other starting from Veracruz. In spring they met in Havana before beginning the long voyage to Spain.

Compounding everything was a terrible, unforeseen consequence of an overabundant money supply. With pieces of eight now jangling in most people's pockets—the number increasing as the years went by—the local value of each coin began to shrink. Peasants were hit the hardest. From the first year of the 16th century until the last, the cost of life's necessities rose some 400 percent. It was one of Europe's first severe inflations.

If the gusher of silver brought financial strain, any interruption in its flow was even more distressing. The loss of a single treasure galleon could set off a string of private bankruptcies and send ripples of anxiety through the Spanish court.

The treasure crossed the Atlantic in heavily armed convoys of a dozen vessels or more, their movement strictly regulated by the House of Trade in Seville. One fleet, the *Galeones de Tierra Firme*, would sail from Cartagena on the Spanish Main, then move along the coast to Panama, lading in the riches of the New World—sugar, tobacco, animal hides, rare dyes, pearls from Venezuela, emeralds from Colombia, chests of gold and ton upon ton of silver coins and ingots. The other convoy, the *Flota de Neuva España*, would emanate from Veracruz on the Gulf of Mexico. In early spring the two fleets had to buck the trade winds east to Havana, Spain's massively fortified gateway to the Caribbean, where they joined forces, time permitting, for the perilous journey home.

There were dangers every mile of the way. To guard against pirates, heavy fighting galleons sailed with each fleet. Beamy, ponderous vessels of 600 to 1,000 tons or more, bristling with up to 100 bronze cannons each, they were seagoing, square-rigged versions of Brinks armored trucks. They carried the king's silver.

Sea and wind were the real hazards. Loaded galleons ran deep in the water. With no truly reliable charts and only a compass and astrolabe to guide him, a galleon's pilot faced an obstacle course of underwater shoals and coral reefs that littered the Caribbean. He could fix his north-south position with some accuracy, but there was no sure way of telling how far east or west he might be. The best bet was to find a landmark—the headlands of Cuba, say, or some other formation whose profile he knew.

Storms were seldom a problem if the admirals kept to schedule and left Havana in June or July, well ahead of the hurricane season. But often they were late. With appalling consequences. In 1545 a pair of

August hurricanes blew in back to back, wrecking most of the shipping that had stopped over in Santo Domingo, on the island of Hispaniola (which now comprises Haiti and the Dominican Republic). In 1553 another hurricane smashed into the New Spain fleet en route from Veracruz to Havana, driving all but three of its 20 ships onto the Texas coast, strewing the sands with silver. A decade later, six ships went down off Cuba. As much as one-eighth of all the gold and silver shipped from the colonies may have ended up on the ocean floor.

No wonder, then, that men like Captain Phips were tempted to go fishing for this lost booty.

The vessel Phips set out to discover was the *Nuestra Señora de la Concepción,* which had foundered north of Hispaniola in 1641. The *Concepción* was sailing as the *Almiranta,* rearguard warship of the New Spain fleet, and her voyage was ill-fated from the start. Built 20 years earlier as a merchantman, she had been converted to a galleon with towering parapets fore and aft, and 40 bronze cannons. Now she had spent more than a year at dockside in Veracruz, the mildew attacking her canvas and shipworms eating into her hull. There had seemed enough time to give her an overhaul, for the fleet was not due to sail until the following year. Then new orders arrived from Madrid, changing everything.

Philip IV, like his Habsburg forebears, was in deep financial trouble. The Dutch war had flared up again and now France had joined in; Spain's credit was wearing thin. There was nothing to pay the troops with. Philip needed silver, and fast. The New Spain fleet must sail immediately, ready or not. As *Almiranta,* the *Concepción* carried half the king's shipment of silver, along with a larger but undetermined amount of private treasure. She was dangerously overloaded.

At dawn a wave broke over them

Once in Havana, her skipper, Vice Adm. Juan de Villavicencio, pleaded for time to repair his hull. But it was already the first week of September and the treasure-fleet admiral, in a hurry to get going, turned him down.

On September 28, somewhere off St. Augustine, lookouts reported a heavy black cloud building up to the south. That evening the storm whistled down with a fury of wind and sea so powerful that no one aboard could remember its like. At dawn a wave broke over the side, reaching the lantern on the poop deck 50 feet up. The great ship rolled onto her side and water poured in through her leaky gun ports. Staggering upright, she was hit repeatedly, so hard that the caulking in her stern planks sprung loose. The crew worked the pumps while terrified passengers bailed and prayed to a statue of the Virgin Mary that was bolted to the poop deck. When the sea finally tore the sacred image from its moorings and carried it off, all hope seemed to disappear. But somehow the *Concepción* stayed afloat. Eventually the winds abated. The crew rigged a small jury sail on the battered foremast.

The hurricane totally scattered the fleet of New Spain and sent at least three ships to the bottom. The *Concepción*'s pilots could only guess at the ship's posi-

Phips' divers worked 40 days 40 feet down on wreck of *Concepción,* bringing up 68,511 pounds of treasure.

Doomed galleon, *Nuestra Señora de la Concepción,* was hit by an astounding storm in 1641 and knocked down. She righted herself and struggled on until she finally struck a coral reef off island of Hispaniola.

tion. A decision was taken to steer south in hopes of finding one of the Bahamas or perhaps Puerto Rico.

What she did find was an enormous coral reef some 60 miles north of Hispaniola. The ship struck at nightfall on October 31, grinding into the coral heads and ripping her bottom as though it were so much crepe paper. For several days she was hung up on the reef and then began to break apart. A single longboat had survived the storm, and a number of passengers and high-ranking officers got into it, including Vice Admiral Villavicencio. The rest climbed aboard rafts built from ship's timbers and trusted their fate to wind and current. Some managed to drift to safety on Hispaniola. But of the 490 souls known to have sailed from Havana, more than half were never heard from again. And all of the *Concepción*'s precious cargo lay heaped among the sea feathers on the bottom.

There it lay nearly half a century, roiled by the ocean currents, the sands dusting down upon it, the coral building up around it, while the shipworms consumed the galleon's ribs and planking.

Rumors of its whereabouts kept surfacing in the port towns of the West Indies, along the waterfront at Bermuda and in the taverns of Jamaica. No doubt William Phips, who had gone to sea at an early age and now captained his own Caribbean trading ship, fastened greedily upon them. Five different expeditions had been launched over the years to hunt for the wreck, and all five returned empty-handed. Phips was hardly concerned with other people's failures. In the summer of 1683 he turned his helm toward England to get support for his own venture.

When planning the improbable, Phips decided, go straight to the top. He demanded—and obtained—an audience with Charles II. Something in the Yankee's rash, brash manner must have impressed the British king. For that September, Phips sailed back to America in charge of a Royal Navy ship, a salvage charter signed by Charles in his pocket.

First attempts in the treasure business seldom hit pay dirt. There were three large coral banks north of Hispaniola and though Phips went to the right one, he found nothing. He later returned to England with little to show for the trip and was packed off to the Tower of London on charges of misusing a Navy vessel.

Nothing daunted, Phips talked his way out of jail and cast about for new backers. Another king had come to England's throne, James II, who had no time for treasure hunts. But others were eager enough to take a gamble, including the Duke of Albemarle and his high-rolling friends. So in September 1686, Phips sailed again, captain of the *James and Mary.*

Perhaps in talking with Spanish sailors and settlers on Hispaniola, Phips found a nugget of intelligence that others had overlooked. In any event, this time he aimed for the correct site on what is now appropriately

Dodge Lancer, the performance sedan that Honda and Pontiac can't match. Just $9852.

Dodge Lancer vs. Honda Accord DX and Pontiac 6000 four doors.*
Some hard facts for anyone in search of a serious performance sedan.

• **More available power.**
Power is an important performance consideration. Lancer's available turbocharged engine offers more horsepower than the engines offered by Honda Accord or Pontiac 6000. As a matter of fact, the Honda and Pontiac don't even offer a turbo option.

• **Hatchback utility.**
If you're looking for the added convenience of four doors *plus* a hatchback, you'll be glad to know that *all* Lancers come with a hatchback. While the Honda Accord and Pontiac 6000 don't even offer you the option.

• **More passenger/cargo room.**
Room is a major concern for any sedan buyer. Lancer offers more combined passenger/cargo room than the Honda or Pontiac.

• **Longer warranty.**
You'll also want to consider what you can count on down the road. With Lancer you can count on a 5 year or 50,000 mile Protection Plan.** The Honda and Pontiac don't even come close.

• **Lower price.**
Obviously, your bottom line consideration is price. At just $9852,† Lancer is one four-door sedan that delivers the goods for a lower base price than either of the four-door sedans we've discussed. Lower than the Honda. Lower than the Pontiac.†

Considering all the facts, we think you'll agree that it pays to see your Dodge Dealer and buy or lease the one sedan that takes your budget as seriously as your need for performance. Dodge Lancer.

Dodge 5/50
DIVISION OF CHRYSLER MOTORS

Setting new standards of performance.

Chrysler Motors: Best built, best backed American cars and trucks**

*All comparisons are to these base 1986 models (1987 competitive data unavailable at time of printing). **Based on survey of owner problems with '86 cars & light trucks (combined) designed & built in No. America and sold Oct.-Nov. '85 (5 mos. avg. usage) and on a warranty comparison of competitively priced models. See 5/50 limited warranty on powertrain & outer body rust-through at dealer. Restrictions apply. †Base sticker price comparison. Excludes tax and destination charge. Aluminum wheels shown are $310 extra.

BUCKLE UP FOR SAFETY

called Silver Bank, sending a small sloop, the *Henry*, on ahead.

The *Henry* returned with an extraordinary tale. Her skipper had found the Silver Bank with no trouble and had spent two days poking around among the coral heads. There seemed to be nothing. But just as he was leaving, one of his divers spotted an unsually handsome sea feather growing up from the bottom. Swimming down, the diver found himself surrounded by a battery of submerged bronze cannons. Not far away, half-hidden by sand, lay five silver bars. Then there appeared a nest of silver coins, blackened and partly stuck together by 45 years of saltwater corrosion. Of the *Concepción* herself, little trace could be seen. Her mighty timbers were long since eaten away or encased in coral.

Phips spent the next two months in the backbreaking labor of hauling up treasure. The silver lay some 40 feet down; much of it had to be knocked loose from the coral with hammers and crowbars. The divers—West Indians were always preferred—worked without benefit of goggles or air hoses, though three weeks into the search they tried something called a "Bermuda tub," a primitive diving bell made out of a weighted wine cask that provided a place to gulp air near the bottom. Phips soon had stripped away the easiest pickings and he sailed back to England and his moment of glory.

In the decades that followed, settlers in Bermuda and the Bahamas made a tidy living scavenging coins and trinkets that had washed up on their beaches. But as Spain's imperial power declined—partly because she ran out of funds—the treasure shipments became sporadic. A last fleet of galleons sailed from Havana in 1789 and the flood of silver dribbled to a stop. Its source having run dry, the age of treasure hunting appeared to be closed.

It did not open again until just before World War II, and it expanded swiftly with the perfection of scuba gear. A Florida sports director, Art McKee, began retrieving coins, cannons and encrusted artifacts from a fleet that had slammed into the Keys in 1733. Then a retired construction engineer, Kip Wagner, started scooping up silver from the sands off Vero Beach, the remnants of a 1715 disaster. One of Wagner's confederates was Mel Fisher, and Fisher's recent harvest from the *Atocha* may bring him and his backers as much as $170 million.

And what really happens to treasure like this when it reaches the surface? The best coins and artifacts come up occasionally at auction, where the prices they fetch depend largely on their numismatic condition, seldom improved by long immersion in salt water. A few may end up in museums. But most remain in warehouses and bank vaults, awaiting distribution among partners and investors. And much of it is sold off piecemeal to underwrite future treasure hunts.

Consider the final outcome of Phips' salvaging feat and the benefits reaped by him and his backers. Knowing that the *Concepción* held more than 25 tons of treasure, he returned to it the following year. What he found appalled him. The wreck site swarmed with small vessels of every description. Hundreds of divers had ransacked his prize. There was little left.

The voyage went from bad to worse. One financial backer, Sir John Narborough, came to see a little seafloor scavenging firsthand; in the months at Silver Bank he caught a tropical fever and died. The Duke of Albemarle had also sailed west, to take up a post as Governor of Jamaica. He celebrated with an uninterrupted round of partying and before the year was out he, too, had expired—of general high living. Back in England a lawsuit broke out among Albemarle's heirs and the other investors. The parties battled each other in Chancery through the rest of the century and into the next, with most of the loot going to lawyers.

Phips himself had been more eager for fame and position than ever he had been for silver, and at first he seemed to get both. Granted a knighthood, he was made Governor of Massachusetts. But he took office in 1692, in the middle of the first French and Indian War, and just as the Salem witch trials were boiling to a head. Eventually he put a stop to the witch trials but was recalled to London. There he fell ill, probably with influenza, and never recovered. Only the triumph of his first great discovery remained, to whet the imaginations of future treasure hunters.

One of Mel Fisher's divers examines the first silver coins found in the wreck of the *Atocha* in 1985.

By Glen B. Ruh

How petals from the sea form these fragile blossoms

Seashells in their natural colors, collected on the shore, are used by Jaqui Manoff to create her botanically accurate arrangements

Skip Brown

Manoff works in her spacious studio. Beside her is the bouquet of lilacs and roses shown on page 111.

The first impression is simply an arrangement of flowers, thoughtfully composed and placed to complement the surroundings. Look closer, touch them, and you realize that they are not real flowers. But they aren't fake, either—the texture and colors are natural, not artificial. They are seashells. But how can simple shells look so much like flowers and at the same time have such a remarkable beauty and elegance of their own? The fact is that you are seeing shells as you have never seen them before.

It began with a stroll on a beach: a lone woman walking the surf line on the island of St. Kitts in the British West Indies. As she walks she picks up and contemplates the shells left by last night's tide. Nothing unusual in that. We all do it.

In her hand she held a delicate strigilla, as light and translucent as a rose petal; a scallop, its vivid color reminiscent of a crinkled poppy petal. Then came a recollection of shells she had seen before. As a student in London she had sketched 19th-century curiosities in the Victoria and Albert Museum, among them ornate shell-flower arrangements that adorned Victorian parlors. "I think it was then," she says, "that I first grew interested in the similarity of design between marine animals and land flora. The shell of a bivalve coquina is very like the petal of a chrysanthemum."

Perhaps because Jaqui Gozdowa-Godlewska Manoff was a designer with a particular penchant for sculpture, an idea began to develop. Back from the beach she began to work with the shells she had gathered. She now looks back on those first attempts and smiles. But after a few months she had worked out forms that pleased her and others on the island, so much so that one of her early flower arrangements was chosen by the island's governor as a gift for visiting Prince Charles. Since then she has perfected the work to the point that her compositions have been featured in numerous galleries, in the windows of Tiffany & Co. in New York, and are in private collections in Germany, Italy, Switzerland, Australia and the United States.

Today in her Falls Church, Virginia, studio there are dozens of arrangements, some finished and others in progress. The large, skylighted room has the usual artist's materials, tools and clutter. But in this studio the shelves are packed with containers of shells from all over the world. Although she buys some, Manoff prefers to collect them herself and spends weeks each year combing the beaches of the Caribbean and Central America.

There are no endangered species here, just as there are no paints to heighten the shells' colors. Every shell in her work is natural and unaltered: familiar scallops and tiny white clams, mussels and coquinas. There are bits of coral, fragile sea-urchin spines for lily stamens;

The iris took years to perfect: mussel valves, yellow garfish scales, claws of mantis sequilla. Simpler lily stalk has petals of sunrise tellins.

Photographs by Aldo Tutino

The buds are green mussels from the Indian Ocean, poppies are Japanese scallops, the wheat, marginellas.

even the lowly barnacle has its use. Florida tellins will be transformed into Japanese anemone petals. The petals of a peony are jingle shells from the beach at Hyannisport, which are more brilliant than Florida jingles and more crinkled at the edges.

It is understandable that Manoff approaches her creations as a sculptural challenge. After a childhood that took her from Brest-Litovsk in Poland to a Soviet labor camp in World War II, and then to British Palestine, she ended up at St. Martin's School of Art in London. There she was drawn to sculpture. One of her arrangements may look light and airy, but is likely to be quite heavy and in need of structural support. Starting with a wire armature of as many as ten strands at the base, she builds and branches out to single strands that hold tiny buds at the outer edges of a composition.

Every arrangement starts with a rough sketch and takes shape slowly. As each blossom is finished, it is set aside for its own place in the master plan. The shells themselves are fixed in place with just a dab of clear cement, invisible in the finished work. It may take days to build up as complicated a form as a branch of lilacs.

The leaves and stems are attached to the armature with ordinary florist's tape. The leaves, and certain minor details, are the only concessions Manoff makes to altering nature's shapes and colors. The leaves are natural, too—the scales of tarpon, pirarucu, carp, buffalo fish, bonefish or parrotfish—but sometimes they have to be dyed and trimmed to shape. It is uncanny how the structure of a translucent tarpon scale (which is not commercially available and must be collected from a beach or from sport fishermen in the legal tarpon season) can mirror the shape and even the tiny veins of a geranium leaf.

A serious and knowledgeable gardener in her own right, she has challenged herself to create a series of 200 botanically correct specimens. "Sometimes I am so drawn by the amazing coincidences of the chance likeness of a shell to a flower part that my work becomes quite literal," she says. "Though I rather like the freedom of creating a work of imagination, I must say that I am equally at ease with my work on botanical reproductions."

As her own most demanding critic, the work goes slowly and carefully. There are always new materials to be discovered and new relationships to be made. Who knows? Perhaps a shell is right now washing up on some isolated beach that will be the answer to an otherwise unsolved problem. In Jaqui Manoff's art there are no tricks—simply an imaginative perception of form, exquisite skill and patience.

Glen B. Ruh is involved with writing, editing and book publishing in the Washington area.

The shells of tiger lucines from Florida and the Caribbean, with a dimple in the edge, make perfect dogwood bracts; the centers (the actual flowers) are emerald nerites. The tulips are sunrise tellins.

Arrangement of mixed flowers is based on painting by Dutch artist Paulus Theodorus van Brussel.

South African daisies have coquina petals, are centered with jewel-like cat's-eyes from the Pacific.

Overleaf: Bouquet took a year to make. Lilacs are coquinas (note different shades), roses are strigillas.

HOW TO HELP SAVE LIVES AND REDUCE INJURIES AUTOMATICALLY

THREE-POINT PASSIVE SAFETY BELT SYSTEMS ARE AN EFFECTIVE COMPLEMENT TO BELT-USE LAWS.

General Motors is equipping 10% of its 1987 model cars with automatic lap/shoulder belt systems for the driver and for the right-hand front seat passenger. It is the first step in meeting a federal requirement to phase in passive restraints.

The automatic systems will be standard equipment on most 1987 models of the Pontiac Grand Am and Bonneville, Buick Somerset, Skylark, and LeSabre, and Oldsmobile Calais and Delta 88. By 1990 we plan to equip all GM cars with passive restraint systems.

The belts in the GM system will be connected to the car at three anchor points—one toward the center of the front seat, and two on the front door.

Three-point automatic lap/shoulder belt systems offer the same advantages as GM's current three-point manual systems. Lap and shoulder belts allow you to "ride down" the crash as the vehicle absorbs the impact. They also help prevent you from being thrown from the car in an accident, where you are more likely to be killed or seriously injured.

Safety belts have proved effective in reducing injuries and fatalities. That's why GM supports belt-use laws. Automatic lap/shoulder belt systems will make it even easier for people to comply with these laws.

Opening the door pulls the belts forward for entry. Closing it brings the belts into their operating position. A single push button at the center anchor point releases the system in an emergency. Retractors pull the released belts into storage positions on the door.

Extra attachment points will be built into cars equipped with these systems so you can secure most child restraint systems with an auxiliary lap belt.

General Motors is pursuing other programs that will help reduce the number and severity of injuries caused by accidents. We are designing energy-absorbing interiors. We are phasing in rear-seat lap/shoulder belts, beginning with some 1987 models—kits will be made available through GM dealers to retrofit most older cars with these systems. And we will be equipping some 1988 model cars with driver-side air bags to supplement safety belts.

General Motors has been a leader in automotive safety because we believe that building safer cars is good for you. And good for us.

This advertisement is part of our continuing effort to give customers useful information about their cars and trucks and the company that builds them.

GM

MARK OF EXCELLENCE

Chevrolet • Pontiac
Oldsmobile • Buick
Cadillac • GMC Truck

ART
Huehnergarth

By Israel Shenker

Doing away with all babble from the Tower of Babel

On its hundredth birthday, Esperanto is still the best attempt yet to achieve the dream of creating harmony from our linguistic chaos

In Neurim, Israel, the 42nd International Youth Esperanto Congress had just begun, and one delegate was having her diaper changed.

Tali Wandel, not yet two years old, was the fourth person to register for the conference. She may still be in diapers, but it is never too early to start learning a language of such overwhelming idealism. Esperantists dream of the day their vernacular becomes everyone's second language: babies will babble in it, teenagers will rebel in it, adults will grumble in it and graybeards will reminisce in Esperanto to a fare-thee-well.

The 106 delegates from 18 countries chattered away in the language as though it had been around since the Flood. It is only one of scores of artificial languages that have bid fair to inundate the Universe, but Esperanto has put rivals into the past tense. Estimates of the number of speakers range from one million to 16 million, give or take a zero or two. That falls several billion short of the goal, but at Neurim no dream seemed impossible.

The original dreamer was one Zamenhof, a Jewish oculist (1859-1917) who grew up in Bialystok, which was then in Russian Poland. It was a place where Russians, Poles, Germans and Jews had trouble coexisting in any number of languages, creating a confusion evident even in the array of different first names pinned on Zamenhof—everything from Lazar through Lazarus and Ludovic to Ludwig.

Craving a tongue that would bring men closer to Eden and farther away from nationalism, in 1887 L. Zamenhof offered a book about a *Lingvo Internacia* by Doktoro Esperanto. The pseudonym Esperanto (which means "one who hopes") became the name of the language. Since then, thousands of works both original and translated have been published in Esperanto; Zamenhof himself translated *Hamlet*.

It was elementary for him, since he fashioned a langauge in which logic dominates and exceptions are scorned. Words and roots are drawn from Latin, German, French, English and Slavic, but you notice right away how many cognate words there are. *Dormi* is to sleep, *manĝi* to eat, *paroli* to speak; *vulpo* is a fox, *birdo* a bird, *drako* a dragon. There are "false friends," of course. *Adulto* is not adult but rather adultery, and *domaĝi* is not to damage but to begrudge.

The rules of grammar and syntax are reduced to the manipulation of elementary affixes, and by maximizing the adaptations of individual roots, memorizing of vocabulary is minimized. Barely 2,000 roots provide Esperantists with a 10,000-word working vocabulary. Spelling and pronunciation are phonetic, and wherever it appears, a letter is always pronounced the same way.

With Esperanto, Ludwig Zamenhof hoped to lead the world out of the wilderness of language differences.

Stirring in a dose of circumflexes

The language has the five vowels of English, but no q, w, x or y. To handle such sounds as the *ch-* of child, the terminal gargle of the Scottish loch, the *sh-* of show, the *zh-* sound of treasure, Zamenhof stirred in a small dose of circumflexes. Thus, for example, *c* is pronounced ts, and *ĉ* ch. A *g* sans circumflex is hard as in go, with circumflex soft as in gem. The slightly rounded upside-down circumflex is bestowed on *u*, whose caparisoned incarnation suggests the sound of the English w.

Zamenhof's 16 rules of grammar can easily fit onto a page. Sample: "(1) There is no indefinite *Article*; there is only a definite article (*la*), alike for all sexes, cases and numbers."

Parts of speech are plain to eye and ear. Singular nouns end in *o*, thus *viro* man, *patro* father, *knabo* boy, *filo* son. The feminine is formed by adding *in*, so that *virino* is woman, *patrino* mother, *knabino* girl, *filino* daughter. The plural adds *j* (pronounced like y in boy): *patroj* thus means fathers, *patrinoj* mothers.

Verbs, which wander all over the lot in English, form tidy ranks in Esperanto. Present tense ends in *as*, past in *is*, future in *os*. And the verb stands firm: *Mi estas* (I am), *vi estas* (you are), *li estas* (he is), *ŝi*

Illustrations by John Huehnergarth

Pleasant
company.
THE AMERICAN GIRLS COLLECTION
Books, dolls, dresses & other delights.
Created exclusively for girls ages 6-11.
Available only through our unique, new catalogue.
Send $2 for a year's subscription. Make checks payable to:
Pleasant Company, Dept. 8030, Box 460, Madison, WI 53701
Name
Address
City State Zip
PLEASANT COMPANY

[pronounced "she"] *estas* (she is). It is as though English were to say: I am, you am, he am, she am. It am awkward in English but sounds fine in Esperanto.

All adjectives obligingly end *a*, adverbs *e*. The prefix *mal* denotes opposite: *malbela* is ugly, *malbona* bad and *malserioza* lighthearted. Affix *ej* indicates place: *kafo* is coffee, *kafejo* is coffee house. The short and the long of it: *et* forms the diminutive, *eg* magnifies. *Domo* is house, *dometo* cottage, *domego* mansion. Esperanto even has a prefix *fi* that daubs with disdain: *homo* is a person, *fihomo* a scoundrel, *vorto* a word, *fivorto* a nasty word.

In theory, at least, a trained linguist can acquire a reasonable command of Esperanto after only a dozen or so hours of study. The rest of us may need a hundred hours—a good deal of it devoted to practicing aloud. Herbert Platt, secretary of Britain's Esperantists, originally practiced the language by talking to his dog.

Esperantists tend to be enthusiasts, ever ready to help learners, be pen pals or even extend hospitality to their fellow Esperantists. Indeed the language seems to attract those with an unworldly, idealistic bent. Esperantists dream of furthering peace on Earth through language, with conflicts avoided or resolved because once Esperanto takes hold, people, no longer divided by language barriers, will understand one another. Alas, civil war, uncivil litigation and family feuds seem to continue when people understand each other only too well. Cynical Evelyn Waugh once remarked that the "Esperanto through which contact can be made with people of the most remote sympathies" is alcohol.

The very ranks of the Esperantists have often been divided by virulent dissent. In Zamenhof's lingua franca, *id* denotes offspring, as in *kato* cat,

The author writes frequently for SMITHSONIAN, *is based in Scotland and can speak five languages.*

THE STOMACH ELIMINATOR®

For Travelers, Business Men and Women and Anyone Concerned with their Health and Good Looks

I don't know about you, but I travel a lot and often it's simply not practical to go jogging or do exercise on the road. Worse, it often happens that you eat and drink too much while traveling. The result is stomach flab.

A Portable Device

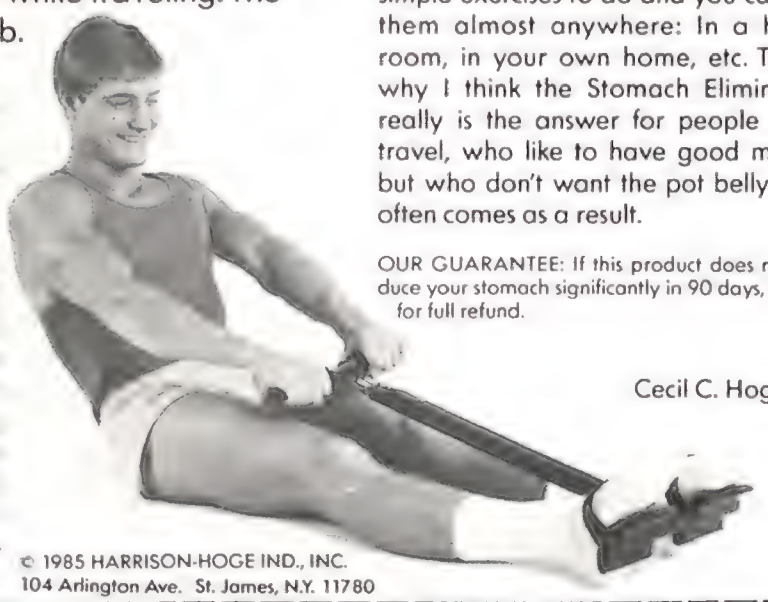
Recently, I found the answer to this problem. In Europe they have developed a 2½ lb. exercise device you can carry in your overnight bag. They call it "NO STOMACH." Designed specifically to eliminate all excess fat from your stomach, it is a stretching and exercise device made with three steel coil springs so you can adjust the level of workout you want.

10 Minutes a Day and Your Pot Belly Will Be Gone!

That's our guarantee. If you're not satisfied with how it works for you, return it for full refund. There are seven simple exercises to do and you can do them almost anywhere: In a hotel room, in your own home, etc. That's why I think the Stomach Eliminator really is the answer for people who travel, who like to have good meals, but who don't want the pot belly that often comes as a result.

OUR GUARANTEE: If this product does not reduce your stomach significantly in 90 days, return for full refund.

Cecil C. Hoge, Jr.



© 1985 HARRISON-HOGE IND., INC.
104 Arlington Ave. St. James, N.Y. 11780

Please send me:
____ Stomach Eliminator at **$19.95** postpaid.

Enclosed is a check/M.O. for $ _____
Charge my credit card:
☐ Amex ☐ Diners ☐ Visa ☐ MC

Card No. _____ Exp. Date _____

Signature _____

NY Residents please add sales tax.

Name _____

Address _____

City _____ State _____ Zip _____

HARRISON-HOGE INDUSTRIES, INC.
Dept. SM71X, P.O. Box 944, Smithtown, NY 11787
Phone: (516) 724-8900 8:30 am-4:30 pm M-F EST

In Esperanto a horse can have his "Horsehouse," but in English the best we can offer him is a "stable."

katido kitten. One notable splinter group called *their* version of Zamenhof's invention Ido, which means offspring in Esperanto. (Bertrand Russell reported visiting Louis Couturat, an eminent philosopher, who regretted that Ido did not lend itself to a noun analogous to Esperantist. Russell suggested "Idiot.")

In Britain's Parliament, Zamenhof's original Esperanto is backed by 177 M.P.s, the largest all-party group in that august body. They feel that for linguistically insular Britons the language could be a great help in dealing within organizations like the European Economic Community. The EEC in fact is financing a study of Esperanto's potential as a *ponto lingvo* (bridge language) between its nine official languages. Forty-four national Esperanto organizations are affiliated with the Universala Esperanto-Asocio located in Rotterdam. Ivo Lapenna was UEA secretary-general for eight years, president for ten. In his native Dalmatia, he had to learn Serbian and Croatian, and at school studied Italian and French. When he moved to Zagreb, Latin, Greek and German were added to the curriculum. "If Esperanto had been generalized," he suggested, "I could have given the endless hours I gave to those languages to other studies. Esperanto will be a world language . . . but not very soon."

The Earth swarms with freewheeling enthusiasts, such as the Biciklista Esperantista Movado Internacia, last sighted pedaling into the future, and the International Esperantist Naturist Organization, a tiny offshoot which embraces nudity in its passion for the promotion of international understanding. Albania once seriously considered making Esperanto compulsory in schools. About a dozen countries beam short-wave programs around the world in Esperanto, among them China and Poland. So does the Vatican. Monda Turismo, the World Esperanto Tourist Association, which offers more than 200 Esperanto holidays, is going strong. The Bulgarian Esperanto Movement owns a training center at Pisanica, and Scotland has an Esperanto laureate, poet William Auld, who has euphoniously translated Blake's "Tyger! Tyger! burning bright/ In the forests of the night. . . .":

Tigro, tigro, brile brula
En arbaro nokt-obskura. . . .

Humorist Robert Benchley noted that Esperanto was supposed to unite the best features of all languages "without all this monkeying around with pocket dictionaries." But, he suggested, "When Esperanto is finally made the universal language, we shall all have to go back to school again."

At the Neurim conference all the true Esperantists dismiss such coun-

Maupintour

Discover a grand style of escorted travel. Small groups, professional manager, one price covers everything. Treat yourself to the best!

GALAPAGOS

14 or 18 days include 4 or 7 day Galapagos cruise. Close-up animal and bird viewing. Machu Picchu, Cuzco, Quito, Lima, Panama.

SCOTLAND

17 days in depth. Isle of Skye, Edinburgh, the Highlands, Orkney and Shetland Isles, Loch Lomond, Aberdeen, Loch Ness, Glasgow.

EUROPE

8 to 32 days. Middle Europe, British Isles, London Theatre, Scandinavia, Greece, Spain, Portugal, Morocco, Soviet Union.

FREE TOUR BOOKS. For a copy of Maupintour's ☐ *Galapagos,* ☐ *British Isles,* or ☐ *Europe* tour books, ask your travel agent, call or check box and mail to Maupintour, 1515 St. Andrews Dr., Lawrence, KS 66046.

quality escorted tours since 1951 Maupintour

name

address

city/state/zip

my travel agent *ssn-gse-7*

Telephone toll-free . . . **800-255-4266**

THE METROPOLITAN MUSEUM OF ART

Spring Catalogue

Please send me the new 48-page Spring Catalogue: a selection of more than 250 unusual gifts, reproduced from works of art in the Museum's collections. Glass, silver, porcelain, jewelry, prints, books and more.

Prices from less than $10 to more than $500—with a wide selection of wonderful ideas for Mother's Day, Easter, weddings and other special occasions. Enclosed is $1.00 to cover mailing costs.

ACA7

Name_____

Address_____ Apt._____

City_____ State_____ Zip_____

The Metropolitan Museum of Art

255 Gracie Station, New York 10028

Plains Indian art, artifacts and jewelry.

Colorful, educational catalog shows over 100 beautiful examples of mounted buffalo skulls, bow and arrow sets, knives, painted buffalo and elk robes, shields, axes, lances, dance sticks, dolls, ceremonial pipes, rattles, shirts, coyote fang necklace, other bone jewelry, silver jewelry and more unique gifts, stunning decorations and collector's items from exclusive source. All are hand made with authentic materials.

Catalog tells the fascinating story of each item's place in Cheyenne, Sioux, and Blackfoot heritage. For your copy, send $2.00.

PRAIRIE EDGE DEALER INQUIRIES INVITED

PHONE SALES CATALOG REQUEST OFFICE

P.O. Box 8303, Dept. SM2

Rapid City, S.D. 57709-8303 (605) 341-4525

VISIT OUR STORES IN SANTA FE, N.M. AND DEADWOOD, S.D

DISCOVER EUROPE'S ROMANTIC WATERWAYS . . .

FLOATING THROUGH EUROPE

Dept. 104, 271 Madison Avenue

New York, N.Y. 10016

(212) 685-5600 • 1-800-221-3140

$500 REWARD

Mail us your business card and we'll reward you with discount certificates worth $500 on computer and software products at over 100 stores nationwide.

Software City®

5187

1415 Queen Anne Rd., Teaneck, NJ 07666

SOLID BRASS

THE WALL SWINGER

$19.99

Add $4 Shpg. ea.

Factory to you . . . we make the world's greatest values!

An essential addition for any room in your home. This functional and versatile lamp extends two feet and comes complete with 11½" dia. textured white shade. Your choice of polished brass or mellow antique finish (please specify). *Satisfaction a promise.* Check, VISA, or Mastercard. Order #90.

3-way light

Nothing else looks like hand polished solid brass!

(215) 729-2240

with luxe cord cover

ROBELIER

1500 South 50th St.

Phila., Pa. 19143

Dept. ST1-7

Quantity	Finish	Price Each	Total
#90		$19.99	
☐ Mastercard	PA res. 6% tax		
☐ Visa	shipping ea.	$4.00	
☐ Check		TOTAL	

_____

Signature _____ Ex. date _____

Name _____

Address _____

City _____ State _____ Zip _____

AK, HI, PR, VI—addt'l $3. shpg. ea.

RUSSIAN LACQUER BOXES

PLEASE SEND FOR OUR FULL COLOR BROCHURE $2

LIGHT OPERA GALLERY

GHIRARDELLI SQUARE #102S

SAN FRANCISCO, CA 94109

415-775-7665

ENGLISH WAXED COTTON RAINWEAR

by Britton

The Country Hat tops our wide range of jackets and coats *made in England* of the finest quality waxed cotton. See them all in our catalog.

No. 17352 COUNTRY HAT, dark olive **$25.00**

State hat size 7 through 7-5/8

Check, Mastercard or Visa. Add $1.50 for shipping. Satisfaction Guaranteed. Send for our unique catalog. Visit our store when in the Seattle area. For orders and inquiries telephone **(206) 485-2132**

David Morgan

11812 Northcreek Pky. N., Suite 103 Bothell, WA 98011

terrevolutionary rhetoric. And thus, Amri Wandel, father of little Tali, though he is an Israeli, speaks to his pre-school daughter in Esperanto (Tali's mother, Gila, uses Hebrew). "Esperanto has nothing superfluous and nothing missing," said Amri. He is an astrophysicist at Stanford, and former president of the World Esperanto Youth Organization. He came to the language via a correspondence course of 16 lessons. "Last year in Germany I gave a talk on astrophysics, and everything was in Esperanto," he said. Quasar it turns out, is *kvazaro*. The big bang? *La granda eksplodo.*

The current president of the Esperantist youth, English solicitor Ian Jackson, lives in Hong Kong. He went out in the midday sun of Israel wearing a long-sleeved shirt and tie, demonstrating the stoicism that built the Empire and survived its dissolution. "Throughout this week I will be totally in Esperanto," he said. "I will be cursing in Esperanto and certainly dreaming in Esperanto. The lan-

W, Q, X and Y are not to be found in Zamenhof's language.

guage is not perfect—most Esperantists would agree with that—but about what should be changed we don't agree. We've got a bit of a chaotic situation with one of our suffixes. Feminists object to *viro* and *virino*. They don't like the feminine being based on the masculine.

"In Esperanto you can use a single root to make a noun, an adjective, an adverb. You can even make prepositions into verbs, which can be useful in poetry. Take *tra* (through). In Esperanto you can say *La amo trais min* (Love throughed me)."

Nonetheless, Jackson doesn't see Esperanto being legislated as the world's international language. "Even if you had a resolution in the United Nations General Assembly," he notes, "everyone would ignore it, as they do all the other resolutions. But if you want to travel around alone or in a small group and stay in people's homes, Esperanto is ideal."

To a cosmopolitan European, Esperanto sounds like the speech of an Italian who has stuttered through France, Spain and Germany, then babbled across Central Europe, borrowing all the way, understood—and misunderstood—everywhere. Esperantists, however, think it's very euphonious, combining the swing of Italian with the resonant buzz of the Slavic languages. They seem to think, too, that the Yugoslavs have the best accents in Esperanto. Jackson's own English-accented Esperanto has some doubtful sounds. At least several of his nuances escaped colleagues like Henrik Karlsson, from Sweden, who has been studying the language for 55 years and now—at age 75—makes a practice of going to Esperanto meetings all over the world. Officially he was a bit old for the Neurim meeting but young Esperantists welcome enthusiasts of any age.

Israel's Eldad Salzmann, a mere 26, vaunted Esperanto's merits in computer translations. "If you try to translate from Greek to Norwegian via English, chances are you'll go

Joyce E. Nichols'

SECRET OF PLAYING BY EAR

(The original book profusely illustrated, coinciding with her famous audio/visual course at Arizona colleges)

It's for beginners and advanced...for all ages...for all who want to *play by ear, transposing* and *improvising* any type of music. *"This book is the missing link to music!"* one student so aptly describes it.

Satisfaction guaranteed! Or full refund in 7 days.

Send $19.95 to Nichols, 7625 E. Camelback Road, 418B-S1, Scottsdale, AZ 85251. (Visa/MC/Diners)

Travel with Scholars

Summer 1987 / 3- to 6-week programs

- ☐ **18th Oxford Program:** 28 courses: arts, history, literature, taught by Oxford dons
- ☐ **Florence & Tuscany:** art & history
- ☐ **Writing for Television** in London
- ☐ **Edinburgh/Berkeley Program:** Scottish art, history, literature
- ☐ **Inside London Theater** with the National Theatre of Great Britain
- ☐ **Arthur's Britain:** England & Wales

For a brochure: (415) 642-3112, ext. 7
Or send this coupon with name & address to: Marketing Dept. 7E, University of California Extension, 2223 Fulton, Berkeley, CA 94720.

UC Berkeley Extension
Educational & cultural programs for adults

Scientific Study Ranks NordicTrack #1

Bill Koch
8 time Nat'l X-C Ski Champion
Olympic Silver Medalist
World Cup Winner

NordicTrack Pro With Adjustable Elevation

© PSI 1986

In tests of exercise efficiency at a major university, NordicTrack burned more calories and provided greater aerobic workouts.

Rank of Efficiency

1. NordicTrack X-C Ski Exerciser
2. An Exercise Bike
3. A Rowing Machine
4. A Shuffle-Type Ski Exerciser

Scientific Abstract available upon request.

NordicTrack's higher oxygen usage test scores show that more muscle mass is involved in the exercise and more calories are being burned.

It's Only Logical that NordicTrack Would Get the Highest Scores.

NordicTrack is More Complete Than an Exercise Bike

NordicTrack adds important upper body exercise and more uniform leg muscle usage.

Cross Country Skiing Is More Efficient Than Rowing

NordicTrack's standing position exercises the lower body muscles more uniformly. NordicTrack's arm resistance is separately adjustable—allows a more ideally proportioned exercise. Rowing machines use only one resistance setting for both arms and legs.

Burns Up To 600 Calories per 20 Minute Workout

For effective weight control.

NordicTrack has Inertial Resistance Not Available on a Shuffle-Type Ski Exerciser.

Other ski exercisers use less effective frictional resistance with a resulting calisthenics-like feeling. NordicTrack's unique flywheel provides more effective inertial resistance for a life-like feeling of smoothness and continuity matched only by real skiing.

Free Brochure. Call
800-328-5888
Minnesota 612-448-6987

NordicTrack

141H Jonathan Blvd. N., Chaska, MN 55318

European Featherbed

Our European Featherbed is just like a giant body pillow. Place it on top of your mattress or waterbed, or on the floor and enjoy its natural warmth and body-cushioning comfort. It conforms to your body contours and cushions pressure points, such as hips, shoulders and knees. The Featherbed is filled with a blend of hand selected white goose and duck feathers. Its specially constructed feather- and down-proof shell is a soft 100% cotton fabric.

The European Featherbed provides a layer of gentle softness between you and the mattress. It's perfect for many uses.

If you're not completely satisfied with the European Featherbed, for any reason, call our toll free number and we'll send a UPS truck to your home — at our expense — to pick it up, and send you a refund (in full) or exchange.

TO ORDER OR TO REQUEST A FREE CATALOG CALL TOLL FREE
1-800-356-9367, Ext. X314,
or use our coupon (call 7 days a week).

FREE CATALOG
- 26 Down Comforter Styles
- Down Pillows
- Duvet Comforter Covers
- 100% Merino Wool Mattress Pads

The Company Store®

EUROPEAN FEATHERBED Style #C502
☐Twin (39" x 75") $39 ☐King (72" x 80") $69
☐Full (54" x 75") $49 ☐Calif. King (72" x 84") $79
☐Queen (60" x 80") $59 Color: White
FEATHERBED COVER Style #0603
☐Twin $19 ☐Full $29 ☐Queen $39
☐King $49 ☐Calif. King $59 Color: White
TO ORDER CALL TOLL FREE
1-800-356-9367, Ext. X314.
Use your credit card. OR ORDER BY MAIL:
☐M.C. ☐VISA ☐Am.Exp. ☐Diners Club ☐Check
Acct.#_____ Exp.Dt._____
STYLE # _____
QTY. _____ x PRICE $_____ =$_____
STYLE # _____
QTY. _____ x PRICE $_____ =$_____
For delivery in IL-5% Tax =$_____
For delivery in MN-6% Tax =$_____
Ship., Hdlg., & Ins. Featherbed- $10 =$_____
Ship., Hdlg., & Ins. Featherbed Cover-$2.50 =$_____
*Federal Express Service =$_____
TOTAL =$_____
For delivery in WI-5% Tax =$_____
Total for delivery in WI =$_____
*☐We ship UPS ground service unless you request otherwise here. Federal Express Service add $8.50.
Name _____
Address _____
City,State,Zip _____
Send to: The Company Store, Dept. X314,
500 Company Store Road, La Crosse, WI 54601.

Herbert Platt, the secretary of Britain's Esperantists, used to practice the language by talking to his dog.

wrong," he said. "If you use Esperanto you won't have these problems." In Esperanto, hardware is *hardvaro*, software *softvaro*. Pirated software is *liftvaro*.

"The language is so flexible in compounding words," suggested Vancouver's Paul Hopkins. "In English we have 'doghouse,' but the place where a horse lives is a 'stable.' You can't say 'horsehouse.' In Esperanto you can. Esperanto is a universal language, spoken all over the world by a certain number of people. If you can find them. When I travel, people at hotels and restaurants speak to me in English because they want my money. Esperantists are not after my money. There's no financial advantage to learning Esperanto."

A 30-year-old economics teacher from Seoul, So Jinsu, arrived from South Korea after two weeks in Europe: "I didn't understand what people were saying, but I telephoned Esperantists in every city and I had no problem. For me it is the first time to visit Europe or Israel, but I don't feel I'm in a foreign country. When I meet Esperantists I'm at home."

Anat Zajdman treated the conference to piano recitals of two Scott Joplin rags, as well as the appropriate choral theme on world brotherhood from Beethoven's Ninth Symphony. There were demonstrations of dance, theatrical sketches, even travelogues on distant lands and landmarks.

Subsidized by her Esperantist grandparents, Liz Warner, 19, went into training for Neurim with a three-week intensive course at San Francisco State University, where some of the world's best Esperantists teach the language each summer. To become fluent, she lived with four local Esperantists. One was Curt Ford, 26, who accompanied her to Neurim. "I found myself sitting at a table with a Hungarian, a Pole, a Finn and a Japanese," he said. "Thanks to Esperanto, we had no language problems."

Dutchman Peter Ottenhoff helps run the National Institute of Education and Sciences. It teaches some 20 languages, and he is en route to learning all of them. "We're a small country and have to make an effort to learn other people's languages," he explains. "That puts us at a disad-

vantage. With Esperanto everybody's on the same level. Chinese know it, French know it. My wife is a Flemish girl. We met each other via Esperanto. If we have problems in Dutch we change to Esperanto."

When delegates gathered outside the *manĝejo* (dining room), Judith Epstein asked what was holding things up. Another delegate, who had been studying Esperanto for only a month, struggled to reply and finally resorted to international shruggery. At daily meals (*matenmanĝo, tagmanĝo* and *vespermanĝo*) shyer delegates often sat silent, trying to recall the word for dessert, torn between *deserto* and *dezerto*. Meanwhile a choir practiced for public performance and a tenor launched into Esperanto's version of "Clementine":

En Kaverno, en kanjono,
laborante je la min',
Vera mastro estis patro,
de filino Klementin'.

Some feminists object to creating *virino* (woman) out of *viro* (man).

ATALAYA IS ON PAGE 7.

Discover *Atalaya*, once the castle-like studio of famed sculptor Anna Hyatt Huntington; and visit nearby Brookgreen Gardens, the world's largest outdoor sculpture garden. It's all right next door to 55 miles of sparkling white sandy beaches. Send for our free 72-page full-color Vacation Guide—and don't miss page 7!

Name _____

Address _____

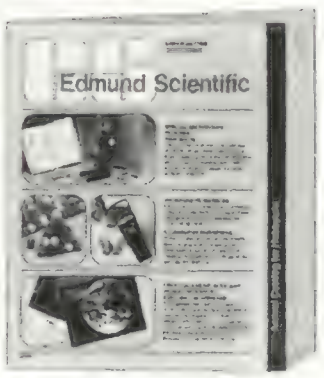
City _____ State _____ Zip _____

Mail to: South Carolina, Room 741, Box 78, Columbia, SC 29202.

South Carolina
Smiling faces. Beautiful places.

Free Catalog

FASCINATING AND HARD-TO-FIND PRODUCTS OF VALUE FOR THE HOBBYIST, GADGETEER, STUDENT AND EDUCATOR FROM AMERICA'S LARGEST SCIENCE MAIL-ORDER MARKETPLACE



- Magnifiers & Optics
- Photographic Accessories
- Science Kits & Toys
- Microscopes & Telescopes
- Magnets & Surplus
- Weather & Solar
- Tools & Motors
- Health & Fitness

Discover the latest in high tech products for your home, shop and office. You'll spend hours browsing through our new 68 page, full color catalog chock full of over 1200 unusual and hard-to-find products designed for better living and to make jobs around your home easier and more enjoyable. **Write for your FREE copy.**

SERVING HOBBYISTS SINCE 1942
Edmund Scientific Co.
2112 Edscorp Bldg., Barrington, NJ 08007

☐ Yes, send me free catalog today.

Name _____

Address _____

City _____

State _____ Zip _____

A SOFT, VERSATILE VELOUR OUTFIT

#950 Two-piece set
The finest velour featured in a luscious V-neck top and matching pants. The top has a banded neck, waist and wrists. Pants have an elasticized pull-on waist. Cotton/polyester knit. Machine wash, dry. Made in USA. Choice of blue, green, gold, brown, red, pink, grape or navy. X-sm(6), Sm(8-10), Med(12-14), Lg(16-18), X-lg(20).

Two-piece set, $39.95
add $2.50 shipping charges

Send for free 128-page color catalog of women's fashions.

THE TOG SHOP
672 Lester Square, Americus, Ga. 31710

art you wear

your choice $19.95

Solid bronze buckles inspired by the legendary works of the Tlingit, the Haida and the Kwakiutl tribes

Crest and totem figures of legend, recreated in three of the Pacific Northwest's most celebrated styles. Each of our solid bronze buckles is a polished piece of workmanship. And every step in its crafting, from original casting to final polishing by hand, reflects a careful attention to authenticity and detail. Shown in their actual size, all buckles fit standard belts up to 1¼" wide. Each is only $19.95, plus $2.50 shipping/handling. Your satisfaction guaranteed. Ask for our FREE catalogue of other unique, nature-related gifts.

YES! Please send me: ☐ Tlingit-style Salmon ☐ Haida-style Bear ☐ Kwakiutl-style Raven
Payment by: ☐ Check ☐ AmEx ☐ Visa ☐ MC

Acct. Number Exp. Date

Name

Address

City State Zip

Coldwater Creek

Box 2069, Dept. G20, Sandpoint, Idaho 83864

The usual third line about the father being a '49er wouldn't make any sense to non-American Esperantists. Besides, "*kvardek naŭ-ulo*" ('49er) would have killed the meter, so it has been replaced with "a true master was the father. . . ."

A class of beginners from West Germany, Italy, Denmark, Scotland and Israel gathered in a Neurim classroom. Teacher Josef Murĵan began by writing the Esperanto alphabet on the blackboard, and then the numbers: *unu, du, tri, kvar, kvin, ses, sep, ok, naŭ, dek.* So much for one to ten. *Cent* is of course a hundred, *mil* a thousand. In Zamenhof's native Poland *mil naŭcent okdek sep* (1987) will be marked next summer with a centenary Warsaw conference.

The Esperanto words for the New Year of 1987 are *mil naucent okdek sep.*

Travel may be broadening, but as Esperantists keep pointing out, foreign tongues can be terribly confining and divisive. *Genesis* suggests that at one time "the whole earth was of one language," and that when Mankind —in overweening pride—began to build a tower (Babel) to Heaven, God confounded their language and scattered them about the Earth, where the towering babble has now unhappily resolved itself into as many as 4,000 spoken tongues.

Accepting the biblical account, many men have believed and still believe in a single primitive language. Scottish enthusiasts have held that Gaelic was the language of the Garden of Eden (others insisted it was Chaldean or Samaritan). Dedicated linguistic evangelists of all sorts find it hard to emancipate themselves from the peculiarities of their own tongues. German universalists showed a tendency to demand umlauts, the French had a *faiblesse* for the subjunctive. Yet through the centuries, to help undo babble, foster international brotherhood and serve the cause of commerce and of learning, legions of ingenious linguists have labored to create one acceptable, universal tongue, not so much to replace local vernaculars as to serve as an auxiliary for all international communication.

The first attempts to create artificial languages were based on logic, rather than on any existing tongues. In the 17th century, Gottfried Wilhelm Leibniz and René Descartes proposed a universal philosophic language. Sir Thomas Urquhart, a Scottish 17th-century man of letters imprisoned by the English for dissidence, offered any one of his jailers who might be willing to spring him a new language, which he called Logopandecteision. It provided seven syllables per word and 12 parts of speech, but never won him a key to his cell.

Another visionary sounded off for an onomatopoeic language, with special assignments for vowels; *a* betokened great affairs; *e* things delicate, subtle and sad; *i* little things; *o* passion; and *u* dark, hidden things.

In 1962 Fuishiki Okamoto, at age 70, reduced Babel to something he called BABM, boasting with apparent justice that it resembled no spo-

ken language. *Bewt* was an ant, *biwc* a gnat, *bowf* a locust, *bwah* a moth, *bwaq* a bedbug.

Jean François Sudre, a 19th-century music master, composed Solresol, employing nothing but the syllables of the musical scale. All words were drawn from do, re, mi, fa and sol forth. *Misol* meant good, *solmi* evil, *solmido* Satan, and *Domisol,* the perfect arpeggio, God. Sudre stopped fiddling when he reached a vocabulary of 11,732 words. You can speak it, sing it, play it on your mandolin, he said, but the world turned a deaf ear.

There have been numerous numerical languages. In Timerio, the blueprint of a Berlin architect named Tiemer, "I love you" was *1-80-17,* and an improper fraction could break up a marriage. In 1938 Dutchman Karel Janson devised a simplified written language called Picto, with some 300 signs (pictos) and 12 symbols, enough to constitute the equivalent of 10,000 words in Dutch. But, alas! Picto looked like the tablecloth doodlings of a restive diner and was positively unspeakable.

Increasingly, however, the luminaries of language have deserted such artificial contrivances in favor of another category referred to as "natural languages"—but rationalized and simplified.

Universal-Sprache presented itself as *un nuov glot nomed universal glot.* Before the *glot* set in, Johann Martin Schleyer, a Roman Catholic priest, spoke up. Disciples credited him with knowing 50 (unless it was 83) languages. It was not enough, so—lying

Esperantists claim that they can go everywhere, mixing with people of many nations, and have no language problem.

Current Events.

Our Project Amazon offers you the unique opportunity to explore a region so vast and mysterious, that until the last decade, the rarest species was man.

Expeditions take place on the World Discoverer or Society Explorer, both 5-star luxury expedition ships. Unlike anyone else cruising the Amazon, our ships are equipped with special expedition craft that allow you to take exciting excursions into the hard-to-reach tributaries.

You'll float down waters covered by a canopy of 200-foot high trees. Photograph exotic wildlife. Journey to remote villages inhabited by ancient tribes. And only Society takes you all the way to Iquitos, Peru; an incredible 2,300 miles from the mouth of the river.

Groups are small and intimate. Expert lecturers will be on board.

Departures: October, 1987. Programs range from 12-28 days. Write or call 1-800-426-7794.

Amazon River

SOCIETY EXPEDITIONS CRUISES
DEPT. SM1, SOCIETY EXPEDITIONS BLDG.
3131 ELLIOTT AVE., SUITE 700
SEATTLE, WA 98121

I want to take an expedition cruise in 1987 ____, 1988 ____, 1989 ____. Please send information on programs checked.

NAME

ADDRESS

CITY STATE ZIP

Expedition Cruises: ☐ Amazon; ☐ Aleutian Islands & Alaska; ☐ Antarctica; ☐ Baja; ☐ Bali to Burma; ☐ Canadian Fjords; ☐ Greenland/Iceland; ☐ Indonesia; ☐ Korea and Japan; ☐ Micronesia; ☐ Oriental Passage; ☐ Polynesia. **Private Trains:** ☐ Imperial Peking Express; ☐ Orient Express; ☐ Paris to Peking Express; ☐ Trans-Siberian Special. **Cultural Expeditions:** ☐ Burma/Thailand; ☐ China/Tibet; ☐ Galapagos Islands; ☐ Gourmet Adventures; ☐ Project Space Voyage.

Society Expeditions
To the ends of the earth. And beyond.

Ships' Registry: Liberia and Bahamas.

Cabela's

100% SATISFACTION GUARANTEED

Rods . . Reels . . . Lures . . . Boating
Camping . . . Outdoor Clothing
Hunting . . . Gifts . . . and Much More.

FREE
CATALOG SUBSCRIPTION

Mail today to reserve your Spring issue!

NAME _____

ADDRESS _____

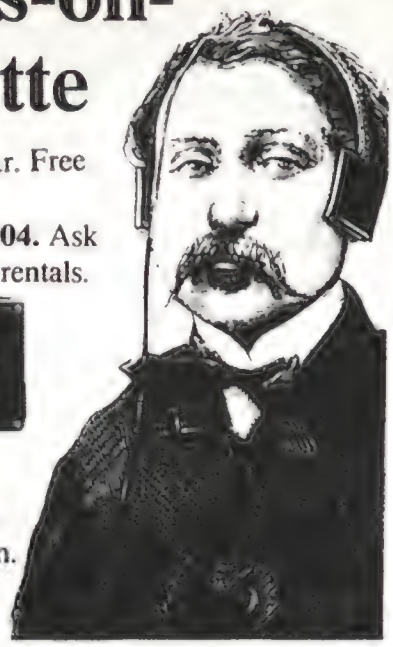
CITY _____

STATE _____ ZIP _____

Cabela's® 425-701st Sidney Nebraska 69160

Unabridged books-on-cassette

. . . In your car. Free catalog: **1-800-638-1304.** Ask about 30-day rentals.



Recorded Books, Inc.
6306 Aaron Ln.
Clinton,
MD 20735

MUSEUM REPLICAS

ETERNALLY ELEGANT
A graceful vase from Classical Greece: #507 Red Figure Lekythos. Huntsman with dog. ca. 470 B.C. 10". Boston Museum of Fine Arts. $55 ppd. (Add 6% in Calif.) Check, Visa, Mastercard. Money-back guarantee.

LARGE SELECTION OF GREEK REPLICAS. Beautiful cultural and decorative treasures for home or office -- used by colleges and museums. Superbly handmade and painted in Greece by master artists. Send $2 for our guide to Ancient Greek Replicas ($29 to $1185).

WORLD TREASURES (714) 848-5401
7691 Liberty Ave., #P, Huntington Beach, Calif.92647

sleepless on the night of March 31, 1879—he devised Volapük (world speech), pruning words back down to their roots, e.g., "wisdom" was *sap* from Latin *săpĭentĭa*).

Bravely confronting the consequences of reform, Schleyer rechristened himself Jleyer. Karl Lentze, the first Volapük professor (or *Volapükatidel*) boasted that in Volapük a verb could have 505,440 different forms. Others thought this nothing to boast about, and simplified the tongue to produce many versions with names like Bopal, Balta, Veltparl, Langue Universelle, Dil and Dilpok. Founding father Jleyer demanded the last word, however, and bitter schisms multiplied.

The Italian mathematician, Giuseppe Peano, whose work inspired symbolic logic, figured out a Latino Sine Flexione (Latin Without Inflexions) or Interlingua, something devoutly wished by generations of schoolchildren. Another innovator even offered a utopian brew of French and English. *Viner* was "to drink wine," *morviner* "to drink more wine," *mostviner* "to drink the maximum possible wine," *aviner* "to abstain." George Henderson, a 19th-century recidivist tinkerer, proposed outright Anglo-Franca. It was French and English with Siamese twinnings such as *assey youself* (sit down) and *meself . . . weselfs. Me pren the li-*

SUBURBAN GARDENERS

Don't Buy A BIG TILLER...

for a small job

If you have an average-sized backyard garden, *hire* somebody to plow it once a year . . . and *buy* a Mantis for yourself. Mantis tills and weeds a practical 6" to 9" wide, turns on a dime and *weighs only 20 pounds!* Simply turning a 300-pound tiller in a backyard garden is a challenge.

Most big tillers were designed to just till (but many now offer clumsy "add-on" attachments as an attempt to justify their high cost). The Mantis was *designed from the beginning* to precisely match a small, powerful engine to a variety of *useful* attachments for your yard and garden.

Most big tillers cost an arm and a leg. The Mantis is a tough, durable, precision instrument . . . yet it costs a fraction of what you'll pay for a big tiller.

3-WEEK TRIAL

Most machines are *partially* covered for 90 days to a year. Mantis has a *Lifetime Warranty* on the tines, a *Lifetime Replacement Agreement* on the engine. Best of all, you get a *3-Week In-Your-Garden Trial* (if you don't like it, we'll buy it back for every penny you paid!).

Tines so strong they're guaranteed for life!

Big Bonus For Early Orders

Mantis

Mantis Manufacturing Co.
1458 County Line Rd., Dept. 24017
Huntingdon Valley, PA 19006

☐ Please RUSH details on the Mantis Tiller/Cultivator and the 3-WEEK TRIAL.

Name _____

Address _____

City _____

State _____ Zip _____

©MMC 1987

These days English is the Esperanto of air travel as well as of science.

We almost made the cover of
SMITHSONIAN

But we were unseated at the last minute, an unsettling experience. The magazine staff, however, thought we would make an interesting addition to the SMITHSONIAN collection of animal posters. Waiting for a bus? A crowded elevator? Looking for a leader? What goes on?

Full-color posters, 22 inches by 33 inches, are a great buy at $4. Send address and check to:

Meerkat Poster
SMITHSONIAN
Magazine
P.O. Box 23624
Washington, D.C.
20026-0624

berté to écriv to you in Anglo-Franca.

During World War II, Lancelot Hogben presented Interglossa, which was strong on Greek roots, but like Esperanto tossed out all synonyms to keep down the size of the working vocabulary. Hogben called it "semantic spring-cleaning." Ron Clark and Wendy Ashby, who work and dream in a London bed-sitter, scrubbed Interglossa clean down to Glosa, which they called the "simplest language ever devised." "Grammar is the linguistic rubbish of the ages," they proclaimed, "so Glosa has no grammar."

Of course there is Basic English, devised by C. K. Ogden, who spoke of the need for "Debabelization" and cruelly suggested that what Europe needs is 50 more dead languages. Ogden boasted that Basic English could be learned in two weeks, and with 850 words say just about everything. In 1943 Winston Churchill, master of non-Basic English, generously commended Ogden's innovation to a Harvard audience. But translated into Basic English, Churchill's most famous speech, "I have nothing to offer but blood, toil, tears and sweat," came out something like, "blood, work, eye wash and body water."

Widely used languages, applied internationally, are also spoken for by those seeking universal communication, sometimes with historic precedent. Greek was spoken over much of the Western world for a time. So was Latin, though it was never *quite* universal—stubborn subjects and recalcitrant verbs, not to mention the Visigoths, saw to that. In any case, in fact in all its cases, Latin lacked regularity, logic and brevity and it was hardly easy to learn.

French was once the internationally accepted instrument of diplomacy, but it has hundreds of irregular verbs, thousands of verb endings and lacks the lexical richness of English. Moreover, *le français* has lately found it impossible to withstand the assault of *l'anglais*, resulting in the fragmentary and dubious Franglais.

Now
YOU May Possess
A Sterling Silver
Replica of

THE AMERICA'S CUP

For 135 years the America's Cup has symbolized for sports lovers one of the greatest world events in competitive sports. . .it is the hallmark of victory among racing yachts.

To commemorate the 1987 Races, the Florintine Mint brings you the Official Replica of this Cup in an *unconditionally guaranteed limited and numbered edition* which you will proudly possess as a collectible of lasting beauty.

There will be only 5,000 of these Sterling Silver Replicas for worldwide distribution. The molds will be destroyed after the manufacture of this extremely limited quantity. . .thus virtually assuring an increase in investment value over time.

Each Cup Replica is mounted on a polished mahogany base and enclosed in crystal clear Perspex. . .it is guaranteed to weigh over 12 Troy Ounces of sterling and is 130mm high.

Your complete cost for this priceless collectible is $990, which may be charged to your American Express, Visa or MasterCard in 4 equal monthly installments of $247.50.

Now become part of a thrilling moment in the history of world sportsmanship!

To immediately assure that a numbered and certificated America's Cup Replica is reserved in your name — or for information — phone Miss White at 1-800-453-9600.

Florintine Mint INC.
1850 Union Street, Suite 91
San Francisco, California 94123

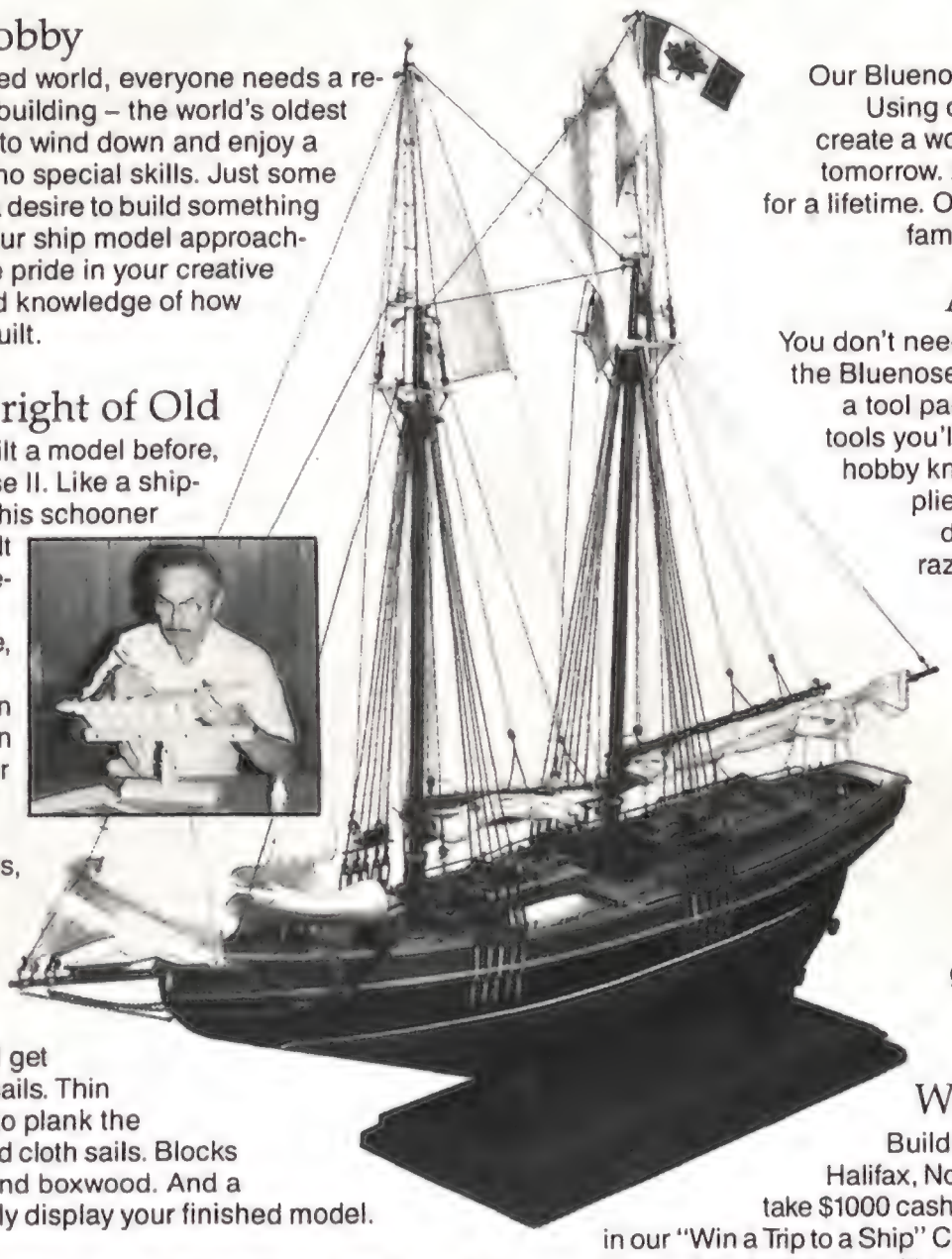
BUILD THE BEAUTIFUL BLUENOSE II

It's A Relaxing Hobby

In today's hurried, harried world, everyone needs a relaxing hobby. Model ship building – the world's oldest hobby – is the surest way to wind down and enjoy a creative outlet. You need no special skills. Just some spare time, patience and a desire to build something worthwhile. As you see your ship model approaching completion, you'll take pride in your creative efforts and newly acquired knowledge of how great sailing ships were built.

Become A Shipwright of Old

Even if you've never built a model before, you can build the Bluenose II. Like a shipwright of old, you'll build this schooner the way real ships were built – using only the finest materials. You'll plank the hull twice; first with Oregon pine, and then with walnut for lasting beauty. Most wooden parts, including keel section and frames, are pre-cut for easy assembly.



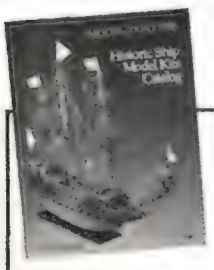
Anchor chains, eye-bolts, and belaying pins are all made of brass. Even the rudder hinges are brass, just like the hundreds of pin nails you'll use to fasten the planking. You'll get cotton rigging to hoist the sails. Thin white Mukali wood strips to plank the deck. Beautiful, pre-printed cloth sails. Blocks and deadeyes of walnut and boxwood. And a wooden pedestal to proudly display your finished model.

Of course, nothing this beautiful and well detailed can be built in a day. Expect to spend 50 to 100 hours building this magnificent schooner. Hours of enjoyment and immense satisfaction. Our clear instruction booklet and giant plans make every stage of construction simple.

You'd expect to pay over $100 for such a high quality kit. But to introduce you to ship modeling, we're offering it at the special low price of $69.95. A small price to pay for a finished model which should be worth many times the cost of the kit.

A Link with the Past

Built in 1963, the Bluenose II is the last of the Tall Schooners. She paraded in the Tall Ships ceremony at OpSail 1976 and again sailed proudly at the Liberty Weekend OpSail on July 4, 1986. She's an exact replica of the original Bluenose, a Canadian fishing schooner that outraced New England's fastest fishing vessels in the Twenties and Thirties, landed record catches of fish, and even ran rum during Prohibition!



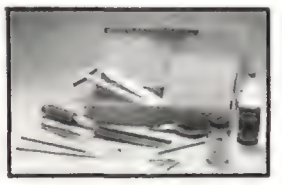
NEW! 64-page full-color Ship Model Catalog with details about the "Win a Trip to a Ship" Contest. FREE with order.

A Treasure for the Future

Our Bluenose II is one of the finest ship model kits. Using only the highest quality materials, you'll create a wooden ship model that's an heirloom for tomorrow. A treasure that will be a source of pride for a lifetime. Or a cherished gift to be remembered by family and friends for generations to come.

A Complete Tool Set Offer

You don't need a whole workshop full of tools to build the Bluenose II – just the basics. We've put together a tool package with all the tools you'll need! You'll get: hobby knife, mini-hammer, pliers, 2 files, ruler, 3 drill bits, 3 blades, razor saw blade, pin vise, tweezers, sandpaper, glue, paint brush and wood oil – a $34.95 value, but now only $19.95 when you purchase the Bluenose II.



Order Today – Get a FREE Book!

Order your Bluenose II now and get a FREE copy of **Ship Models from Kits**, a 110 page book selling for $7.95. This illustrated guide gives step-by-step instructions for building the perfect ship model, plus *dozens of tips from the experts.*

Win a Trip to a Ship or Cash

Build the Bluenose II and win a trip for two to Halifax, Nova Scotia or Vancouver, B.C. Or, you could take $1000 cash instead! Just enter your completed model in our "Win a Trip to a Ship" Contest. Photographic entries must be postmarked by 1/1/88 and will be judged by a panel of independent ship model experts on the basis of excellence of craftsmanship and accuracy. Details about the contest and its many prizes are contained in our 1987 Ship Model Catalog included FREE with your Bluenose II kit.

Special Offer! 90-minute Videotape

Prefer to see it all on your T.V. screen? Watch our new 90 minute VHS Videotape, "You Take the Helm". You'll see the Bluenose II being built by a professional model builder. And you'll learn how to build any plank-on-frame wooden ship model. Many helpful hints and secrets for building professional quality models are highlighted. You'll be an expert on your first trip out! A $29.95 value, this videotape is now specially priced at $19.95 when you order your Bluenose II kit.

Credit card holders may order by phone.

Call Toll-Free 800-228-5588.

24 hours a day.

©Model Expo, Inc. 1986

Model Expo, Inc.
23 Just Road, Fairfield, N.J. 07007

If not completely satisfied, return within 30 days for a full refund.

Visit our stores at:
25 Just Road, Fairfield, NJ
2758 W. Sepulveda Blvd., Torrance, CA

Model Expo, Inc. 23 Just Road, Fairfield, NJ 07007

Dept SM–17

Yes! I want to build the Bluenose II Kit Please send me:

_____ Bluenose II Kit(s) No. AL500B and my FREE beginner's handbook for only $69.95.

Also send me the following at these special low prices

_____ 90-minute VHS Videotape "You Take the Helm" No. SST500 just $19.95 (a $29.95 value):

_____ Tool Package No. MXT100B now only $19.95 (a $34.95 value).

Please include $7.50 for shipping and insured delivery. N.J. residents must add 6% sales tax.

☐ My check _____ Or money order _____ is enclosed

Charge my
☐ Mastercard ☐ Visa ☐ American Express

Card No _____

Expiration Date _____

Signature _____

Name _____

Address _____

City _____ State _____ Zip _____

In 1902 H. G. Wells suggested that English might be the answer to a planet's prayers, and 12 years later obligingly fantasized an atomic war that led to an English-speaking World Republic. English now rules the world of air travel, including hijackings, and is regarded by many researchers as the "Esperanto of science."

English has a rich vocabulary and versatile syntax, but the spelling is execrable. So is the pronunciation. Malay, used widely in Asian commerce, has been proposed, and Swahili has gained acceptance all over East Africa. Mandarin Chinese has conquered China, a land that includes a sizable portion of humanity, using about 50 active languages. More millions speak Mandarin, in fact, than the millions in India who speak Hindi rather than any one of that subcontinent's 225 tongues.

Anthropologist Margaret Mead liked the idea of a minor language, not associated with a great power, in preference to a single international tongue. To honor her Armenian son-in-law she nominated his language, but also saw the possibilities of Pidgin English, although acknowledging that Pidgin bore the stains of servitude and lacked nuances. In Papua New Guinea the Pope delivered the Lord's Pidgin Prayer: *Papa bilong mipela yu stap long heuven, ol I santium nem bilong yu. . . .*" When Israel chose Hebrew as the national tongue, it disappointed Yiddish-fanciers already fluent in *their* international language. Isaac Bashevis Singer, who won his Nobel Prize for works in Yiddish, once dismissed Hebrew as "a soulless Esperanto." Singer began his Nobel acceptance speech in Yiddish, but far from proving universal it was Greek to the assembly. Leon Lipson, professor of law at Yale, has proposed Yiddish as the world's second language, to be used for the minor keys of life. "It would be used for irony, despair, satire and double-edged flattery," he explains. His proposed title: *Desperanto.*

There are thus innumerable rivals for Zamenhof's universal dream, or as John Rapley, of the Universala Esperanto-Asocio, put it, backsliding into English: "Some are with us, and some are agin' us."

It is the enthusiasm of people like Amri Wandel for teaching the language to the young, however, that gives Esperanto more hope than any of its rivals for a return to some form of linguistic Eden. "Perhaps the most important thing in the Esperanto movement is our belief that a universal language is something that is just meant to be," Amri says.

There is something to what he says, perhaps. At the conference, his baby daughter, Tali, interrupted a slide show on the 1986 Beijing Esperantist congress, which attracted 2,500 delegates from all over the world. Her ululation sounded for all the world like a child crying.

Scotland even has an Esperanto poet laureate who has translated William Blake's poem "Tyger! Tyger! burning bright. . . ."

CASTLE ROSE
LANCASTER
CANDLELIGHT
ROYAL DANISH
G & M WASHINGTON
PRELUDE
OVER 2,000 PATTERNS IN STOCK
MILBURN ROSE
FAIRFAX
CHANTILLY
SEA ROSE
ROSE POINT
WE HAVE PATTERNS BY THE FOLLOWING CHINA MANUFACTURERS
• Aynsley • Lenox • Spode • Castleton • Minton • Syracuse • Franciscan • Noritake • Wedgwood • Haviland • Royal Doulton •

Sterling Flatware and China Replacement Service

STERLING • CHINA

Replace lost or damaged pieces
Complete your starter set
Add serving pieces

ACTIVE, INACTIVE AND OBSOLETE PATTERNS AVAILABLE

We have thousands of sterling flatware and china patterns in stock. We can help replace your missing pieces, even if your pattern is inactive or obsolete! Many of the patterns we carry are not available in retail stores. Get just the piece or pieces you need today!

EASY TO RECEIVE YOUR FREE PRICE LIST

Just tell us the pattern name and manufacturer of your sterling or china, or both! We will send you a list of all the pieces we have in stock in your pattern, and the price for each. We buy and sell sterling and china daily, so our inventory is constantly changing. We will add your name to our silver and china register, to update you frequently on new inventory in your pattern, all at no obligation to you!

SEND THE COUPON BELOW TODAY

Use the handy coupon below to inquire about both sterling and china. The sooner you mail the coupon, the sooner you will get the piece or pieces you need to complete your sets! Join the thousands of satisfied customers who now enjoy owning full sets of sterling and china. Your satisfaction is 100% guaranteed.

Walter Drake Silver and China Exchange

5881 Drake Bldg., Colo. Springs, CO 80940

CHARGE IT!

MasterCard and Visa Welcome

WALTER DRAKE SILVER AND CHINA EXCHANGE
5881 Drake Bldg., Colo. Springs, CO 80940

Your Name _____
Address _____
City _____
State _____ Zip _____
Sterling Pattern Name _____
Manufacturer _____
I am interested in: ☐ Buying Sterling ☐ Selling Sterling
China Pattern _____
Manufacturer _____
I am interested in: ☐ Buying China ☐ Selling China
☐ I am unsure of my sterling pattern, please help me with identification.
☐ I am unsure of my china pattern, I am enclosing a sketch or photograph of my pattern.

Book reviews

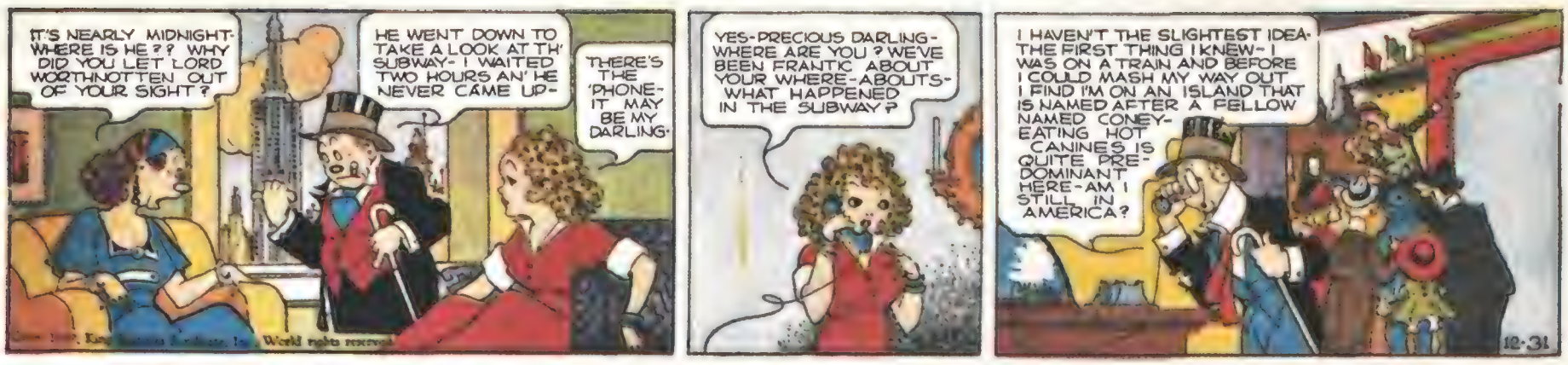
Jiggs Is Back
George McManus
Celtic Foundation, $12.95

When I was a child in the early 1950s, there was a bakery called Butterflake around the corner on Gunhill Road in The Bronx. On Sunday mornings, cars were triple-parked in front of it and the air in the street shimmered with warmth and the sweet smell of baking. I could go to Butterflake, take a number, go to Mass at St. Brendan's and get back before the cycle of numbers had come all the way around to mine. My treasure consisted of warm white paper bags fragrant with crumb buns, cinnamon buns, jelly donuts and oven-hot rolls of a miraculous golden lightness. (On rare visits from far-off Ohio, my cousins devoured those rolls like marshmallows.) At home, the apartment was cozy with fresh-brewed coffee and the papers were piled on the couch.

In deference to her age, Nanny, my grandmother, got the funnies first. It took her a while to read through them. She laughed, wiped her eyes, read aloud the best lines, described the funniest pictures. The characters of *Blondie* and *Gasoline Alley* were like neighbors, she loved *Moon Mullins*, but Jiggs and Maggie of *Bringing Up Father* were her oldest friends and she lingered with them every week.

From 1918 until his death in 1954, George McManus wrote and drew the Jiggs comic strip for the Hearst newspapers and King Features Syndicate. At the height of its popularity, it reached 80 million readers in 46 countries and 16 languages. McManus' characters, like himself, were Irish-American, but I can echo novelist William Kennedy's introduction and comic historian Bill Blackbeard's commentary in *Jiggs Is Back* in saying that they never seemed so to me. Nor, I am certain, did they seem especially Irish to Nanny. They were just like people we knew. They *were* people we knew. And judging from the strip's enormous circulation, they were people *everybody* knew.

America had catapulted Jiggs and Maggie from the hod-carrying and laundering days onto every immigrant's dream of Easy Street. Maggie, bedecked and bejeweled, longed for a level of social sophistication more vivid in her mind's eye than in reality. Jiggs himself, splendid in his spats, red vest, wing collar and top hat, longed only to get out of the house for a lively evening with his old cronies, who were


IT'S NEARLY MIDNIGHT- WHERE IS HE?? WHY DID YOU LET LORD WORTHNOTTEN OUT OF YOUR SIGHT?
HE WENT DOWN TO TAKE A LOOK AT TH' SUBWAY- I WAITED TWO HOURS AN' HE NEVER CAME UP-
THERE'S THE 'PHONE- IT MAY BE MY DARLING.
YES-PRECIOUS DARLING- WHERE ARE YOU? WE'VE BEEN FRANTIC ABOUT YOUR WHERE-ABOUTS- WHAT HAPPENED IN THE SUBWAY?
I HAVEN'T THE SLIGHTEST IDEA- THE FIRST THING I KNEW- I WAS ON A TRAIN AND BEFORE I COULD MASH MY WAY OUT I FIND I'M ON AN ISLAND THAT IS NAMED AFTER A FELLOW NAMED CONEY- EATING HOT CANINES IS QUITE PRE- DOMINANT HERE- AM I STILL IN AMERICA?
12-31

Jiggs has taken daughter Nora's rich English husband on a tour of New York—and lost him in the subway. Hours later, the family waits and wonders. . . .

boorish, bumbling and besotted, every last one of them. For millions of working-class Americans, Jiggs and Maggie seemed like people who had just left the old neighborhood last week to move uptown.

Jiggs Is Back reprints strips mainly from the 1930s and '40s. McManus' versatile artwork catches the look of real life and the original colors still glow. Those colors are usually bright primaries, suitable for characters whose lives were painted in bold strokes, but McManus could also be subtle or elegant. In the most impressive series of strips here, Jiggs and Maggie take a lengthy vacation, criss-crossing the United States, and McManus has a field day with Niagara Falls, the inner workings of Boulder Dam, the shifting hues of the Grand Canyon and the bustling streets of New York.

The wit and ironies of the dialogue still hit home. Maggie always hated reminders that her lily-white hands came from many years of laundry suds, yet Jiggs, a perfect balance for her, could hardly be blamed for being true to his origins. My grandmother certainly admired Maggie's aspirations to a better life, but she also understood Jiggs. How we all wanted to get ahead then, yet how quick we were to spot somebody putting on airs.

Gunhill Road has deteriorated now, the store where Butterflake was is a karate school today and Nanny has been in Heaven for 17 years. But a part of the world she knew, and of the world she helped construct for me, is still alive—and still funny—in the carefully lettered dialogue and brilliant colors of *Jiggs*.

Alan Ryan
New York novelist

WELLNESS PRODUCTS FROM VITAL Concepts™

A SERIOUS CYCLE FOR SERIOUS WORKOUTS

Now you can build a firm body, trim off inches, increase endurance, with a cycle that stands up to a vigorous workout.

Beautifully engineered and smart, too. Easy-to-read LCD console houses a space-age microprocessor-based electronic control panel that monitors time, speed and distance in 8 second intervals, or in a continuous mode. Memory function allows two people to keep separate records of their exercise program.

Ten-pound flywheel is gear driven for whisper-quiet operation. Graduated tension control lets you set the workout you want. Comfortable contoured seat with adjustable seat post and cushioned foam grips on multi-position handlebars enhance the ride. Sleek, modern, steel frame, high-impact housing, and "no-mar" footpads.

Requires a mere 28.5" X 15.5" of floor space and looks great anywhere, home or office. Requires minimal assembly.

When you want an invigorating workout, you'll want the quality and stability found in the Electronic Exercise Cycle (6006) by Vitamaster.

Only **$249.99*** plus shipping and handling.

At Vital Concepts, we want you to be completely satisfied with every product you buy from us. If you're not, return it at any time, for any reason. You'll get a full refund—no questions asked.

Call **1 800 642•VITAL** today.
Or complete and mail the coupon below.

VITAL Concepts™
925 Delaware Street S.E.
P.O. Box 14805
Minneapolis, MN 55414-0805

Please send me Vitamaster Electronic Exercise Cycle (6006) for $249.99* plus $15.00 shipping and handling.

☐ My check or money order is enclosed.
☐ Bill my: ☐ MasterCard ☐ VISA

Acct. No. _____ Exp. _____

Signature _____
☐ Mr.
☐ Mrs.
Name ☐ Ms. _____

Address _____

City _____ State _____ Zip _____

Day Phone ( ) _____

*Minnesota residents add 6% sales tax. 0004
Your product will be shipped within 48 hours of receipt of your order.

Information Hotline 1 800 642•VITAL, Ext. 22. Ask for our free catalog and newsletter.

25 FREE PAIRS

Wright Arch Preserver® Shoes

Yes! 25 pairs of America's finest men's shoes will be given to 25 people who answer this ad. On March 2 we will draw 25 names from those who send for our FREE catalog. Each will choose a pair of WRIGHT ARCH PRESERVER SHOES priced up to $149! Mail this coupon for FREE catalog and YOUR chance to win these famous shoes.

Executive Shoes, Dept. 37 Box E
Rockland, MA 02370

Enter me in the Free drawing, and send Free catalog of Wright Arch Preserver Shoes.

Name (PLEASE PRINT)

Address

City State Zip

MAIL THIS COUPON TODAY!

WORLD'S LARGEST INVENTORY! DISCONTINUED
China & Crystal

We carry all major brands of bone china, earthenware and crystal. Complete your treasured settings. Write or call about your patterns today. VISA or MasterCard accepted.
We BUY and SELL — Call (919) 275-7224

REPLACEMENTS, LTD
1510 Holbrook St., Dept. SM1 Greensboro, NC 27403-2785

NORTH POLE

Fly in small plane to the geographical pole. Toast the world below with arctic specialists.

SPECIAL ODYSSEYS
Box 375, Medina, WA 98039 USA (206) 455-1960

America's finest furniture at deep-discount prices, direct from North Carolina.

The finest brand-name furniture at the lowest possible prices. That simple idea has made Edgar B the largest direct-to-the-consumer furniture company in the U.S.

Choose from Henredon, LaBarge, Baker, Kittinger, Hickory Chair, Hekman, White of Mebane, Councill Craftsmen, Mount Airy, Link-Taylor and others we can't name here.

No matter where you live, Edgar B delivers, neatly unpacks and sets up your furniture—and absolutely guarantees your satisfaction.

Call for our prices on specific items or for our beautiful 224-page color catalog. Or mail the coupon.

Call toll-free during business hours for price quotes or catalog.

1-800-255-6589
In NC, 919-766-7321

EDGAR B Box 849 Clemmons, NC 27012
I enclose $12 for your 224-page color catalog of America's finest brand-name furniture.

Name

Address

City

State Zip

Phone ☐ Home ☐ Office ( )

30518013

The River That Flows Uphill: A Journey From the Big Bang to the Big Brain
William H. Calvin
Macmillan, $25

River journeys are the themes of some of the most entertaining of American stories and songs, from Mark Twain to the ex-duo Ike and Tina Turner.

Now add a thought-provoking ramble down the Colorado in the Grand Canyon by a nervy neurobiologist. River passage strikes a metaphoric chord in all of us for our own lives' journeys. Calvin has chosen one of the most spectacular of raft rides to play a symphony of informed, idiosyncratic notions on the rambles all life has taken.

As he writes before shoving off on a 225-mile expedition: "The best we can do—if we want a journey backward in time, to see the mileposts in the evolution of intelligent beings, to take a voyage to the origins of life itself, if we want to try to piece it all together—is to take ourselves to the bottom of the Grand Canyon." Calvin and his companions—scientists, a lawyer and assorted adventurers among them—have a rather uneventful voyage of their own.

Small genuine moments culled from four Colorado River journeys Calvin took to create this lightly fictionalized composite stand out as quirky changes in pace and place, much as do the changes in river topography. And they resemble the manner of changes wrought by evolution, which Calvin notes as they are written on the canyon walls and argued among his companions.

"We neurobiologists enjoy talking science," Calvin admits, then demonstrates time and again. Either this group stopped philosophizing scarcely long enough to suck in air or Calvin stuffed a raft of his own ideas into their mouths. To wit: "'So who first invented flying?' asked Dan Richard, sitting up front in our boat . . . .'Were the flies the first to fly?' 'Probably,' I responded, 'though not the usual two-winged flies that you swat. They're a streamlined version of more traditional four-winged insects . . . .'"

So maybe, judging by such orations, Calvin is not the sort of guy you'd choose to spend a week with in a small boat if you cared to get a word in edgeways. But he is a guy I'd love to hear in lecture, as his neurobiology students at the University of Washington in Seattle do. Or read, occasional stiffness notwithstanding, in this book or what he calls its "warm-up," his 1983 essays on brain

and behavior, *The Throwing Madonna.*

The river becomes a wide stream of consciousness for a man with an impressive mind and appetite for science. This is a man who developed a theory (that the coordination of nerve cells for rock throwing led to our braininess) while tossing rocks on a beach. Not the idle dreamer, Calvin then derived the necessary physics equations from scratch and wrote a computer program that told him the degree of accuracy the motion required among nerve cells.

This appealing scenario for the evolution of human intelligence gets the most play on the river, but Calvin and friends also toy with notions of cosmology, consciousness, archaeoastronomy and Man's possible aquatic-primate past. Every milestone along the way, geographic and cognitive, is well signposted with chapter subheadings, maps, illustrations and a thoroughly annotated bibliography.

If some of these ideas sound no more than half-baked, documentation notwithstanding, blame it on the desert sun or recreant scholars drunk with ideas, trivial and profound. Or on the river itself. "People on the river are happy to be," Tina Turner sang in "Proud Mary."

William Calvin is happy thinking how people came to be on that river of time. Sit back, enjoy the ride and let his mind steer you through time.

Don Lessem
Massachusetts author and naturalist

Traveller Through Time: A Photographic Journey with Freya Stark
Malise Ruthven
Viking, $19.95

Freya Stark's long, honored career as a traveler and travel writer has combined whims with discipline. She once tried to inveigle her publisher into handing over all her royalties—present and future—so that she could buy herself a mink coat. In her 60s she immersed herself in Herodotus and resolved to visit every city he mentioned. As a young woman she wrote her mother a prospectus that blends dogged study, élan and classic British understatement: ". . . in three years time I could learn enough Persian, Turkish, Kurdish and Arabic to get about, and I believe I would be the only Englishwoman in the Near East to do so; and then something amusing is bound to turn up."

Enough amusing somethings turned up there and elsewhere to furnish ten travel books, four volumes of autobiography and several volumes of letters and essays—not to mention the thousands of photographs she took. Her acknowledged masterpieces are the exuberant early books on the Middle East, *The Valleys of the Assassins* and *The Southern Gates of Arabia.* But Malise Ruthven, son of her wartime secretary and author of the astute text for this book of her photographs, argues that Stark's collected letters may be her most enduring legacy.

Her photographs, too, are distinguished—careful compositions of gleam and shadow that exhibit her artistic heritage. (Her father was a painter and a sculptor, and her mother painted and played the piano with near-professional skill.) She has a special knack for capturing architecture in context—citadels ensconced at valley heads, the colonnaded forecourt of an Iraqi shrine, the crowded shafts of a Muslim cemetery. Stark's versatility—at languages, at the fine arts, at writing—becomes all the

CRUISE THE AMAZON. GET THE CARIBBEAN FREE.

Epirotiki's incredible Caribazon. The most popular new cruise in Caribbean history sails into its third record-breaking year.

You'll cruise to the exotic ports of the southern Caribbean. Then sail a thousand miles up the fabled Amazon River with its breathtaking fauna and flora, its thousand years of history and legend. With expert lecturers aboard to help you capture every enthralling moment. Epirotiki gives you all this for the price of an Amazon cruise alone. 11-day itineraries on the world famous World Renaissance begin December 22, 1986 from $2,295 to $3,595 including roundtrip air connections between Miami and the World Renaissance.

Epirotiki's incredible Caribazon. Why take an ordinary cruise when Epirotiki includes the Caribbean free?

Epirotiki Lines, 551 5th Ave., New York, NY 10176
800-221-2470; in N.Y. (212) 599-1750
Send Caribazon color brochure at once.
☐ Also send Transcanal and Mexican Renaissance brochures.

Name _____

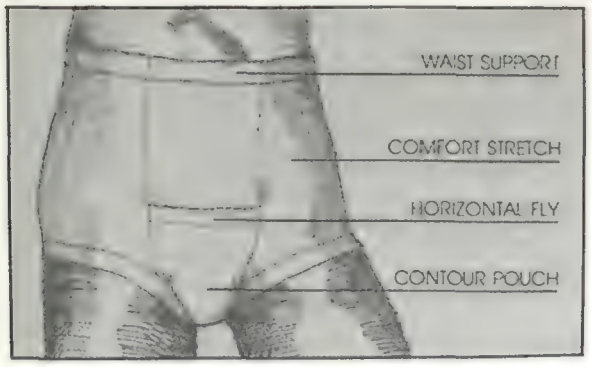
Address _____

City _____ State _____ Zip _____

Travel Agent _____

EPIROTIKI
A WORLD OF CRUISES. A WORLD OF DIFFERENCE.
S-1/87

MANSHAPE®
SUPPORT BRIEFS

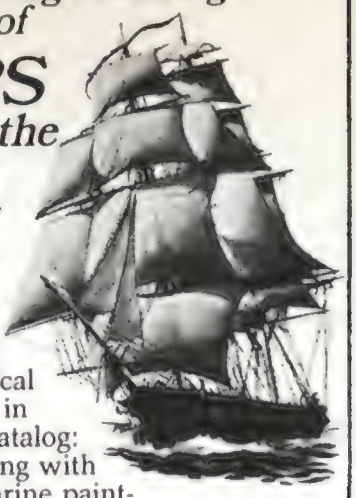


Our new Manshape® support briefs for men provide stomach control and wonderful fatigue-relieving back support. Made of a unique blend of cotton, spandex and nylon. White. M (34-36), ML (38-40), L (42-44), XL (46-48), XXL (50-52). U.S. made. $23.

Phone Orders: (415) 397-7733
☐ *$3 enclosed for 1 yr. catalogue subscription. (Applicable toward future purchase.)*

Q1A017
Cable Car Clothiers
ROBERT KIRK, Ltd.
San Francisco's British Goods Store Since 1939
Mail Orders: No. 150, Post St., S.F. Ca 94108
Manshape (79102Q): Size____ Quantity____
☐ Check ☐ MasterCard ☐ VISA ☐ Amer. Ex.
Card #____ Expir.____
Add $2 ship., hdlg.; Cal. delivery add sales tax
Name____
Address____
____ Zip____

FREE 112 Page Catalog for Lovers of
SHIPS and the SEA



You could shop for months and never find the hundreds of decorative nautical ideas illustrated in Preston's new catalog: 112 pages teeming with ship models, marine paintings, nautical lamps and clocks, ships' wheels, figureheads and scores of other nautical ideas for the Home.

PRESTON'S
67-J Main St. Wharf, Greenport, N.Y. 11944

Study Landscape Planning & Design
One Year M.A. Program
CONWAY SCHOOL OF LANDSCAPE DESIGN
Delabarre Ave., Conway, MA 01341–(413)369-4044

ARCHAEOLOGICAL TOURS
LED BY NOTED SCHOLARS
1987 TOURS:

ISRAEL *April & October*	**PERU** *March*
TURKEY *May & October*	**INDONESIA** *March & August*
EGYPT *February & November*	**SICILY & SOUTHERN ITALY** *April & May*
INDIA *February & November*	**ETRUSCAN ITALY** *May*
CHINA China/Tibet *May & September*; Ancient Capitals *May & October*; Silk Route *September*	**SPAIN & FRANCE** Caves & Castles *June*
BURMA/THAILAND *January & November*	**EASTERN TURKEY** *June*

archaeological tours
30 E. 42 St. Ste. 1202S, NY 10017 • (212) 986-3054

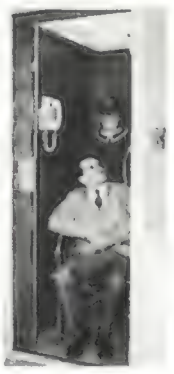
Install an *Inclinette*

It's the safe and easy way for the handicapped or elderly to go up and down stairs with just a push of the button.

Many families prefer our "Elevette"–the modern, home elevator which can be custom built to the size best suited for your needs and serve two or more floors of your home.

Both tax deductible when recommended by a doctor.

Send for free literature and full information.


"Elevette"

INCLINATOR COMPANY OF AMERICA
DEPT. 5
P. O. BOX 1557
HARRISBURG, PA 17105-1557

GENUINE PYSANKY EGGS
Lovingly hand painted by old world/Ukrainian craftsmen. Brilliant colors. Revered Easter symbols. Only $7.95 plus $1.95 handling. SPECIAL 6 eggs $39.00; 12 eggs $74.00 prepaid. ALSO hand etched tinted Polish goose eggs with farm scenes, animals, religious figures. Autographed All different. $19.95 each plus $1.95 handling Two or more $17.95 each prepaid. Stands $2.50 Same day priority shipment. Satisfaction guaranteed
Kidner-Stylophot: P.O. Box 41446 S1, Cinn., Ohio 45241

THE SAILOR'S GAME
BY **SPARKMAN & STEPHENS**
(Yacht designers of 8 America's Cup winners)

An exciting boardgame where advanced sailors tackle questions on seamanship and navigation. Beginners learn the ropes. Everyone becomes more familiar with the nighttime sky, safety, history, oceanography and traditions of the sea.

With 2,160 questions no one sits on deck with empty sails. Players command pewter yachts modeled on great S&S designs.

$45 plus $2 postage. Visa/MC order Tollfree 1-800-835-2246 ext. 61 or send check to THE SAILOR'S GAME. Box 20382-L. Cherokee Sta., NY 10028

more remarkable when one remembers that for the most part she taught herself.

In her travels Dame Freya—as the Queen designated her in 1972—braved deserts, mountains, naysaying border officials and her own insufficient funds. Much of her success was due to her bravado. But her need to practice thrift gave her a kinship with common people wherever she traveled. From Baghdad she wrote: "One has this feeling everywhere among the poorest of our groups: a feeling of old dignity which makes hut and palace essentially the same."

The ability to make sense of and to see timeless meaning in her immediate surroundings is a characteristic of Stark's sensibility as a travel writer. In *The Valleys of the Assassins*, a solitary walk along a mountain trail prompts her to muse on the diminished value of solitude generally and the corresponding rise of the 20th-century disease of "*doing* something always, as if one could never sit quietly and let the puppet show unroll itself before one . . . ." For all of her itinerant bustle, Dame Freya has served primarily as an observer and recorder of the shows unrolling before her, in some of the remotest places on Earth.

Last year, at 93, Stark was planning a trip to Spain. As for death, she views it as another destination: "I feel about it as about the first ball, or the first meet of hounds, anxious as to whether one will get it right, and timid and inexperienced—all the feelings of youth."

Dennis Drabelle
Washington writer

Undaunted by her 77 years, Stark made rigorous trip to Nepal in 1970.

SMITHSONIAN SUBSCRIBER SERVICE

In order to:

- Change your address
- Inquire about . . .
  The status of your membership-subscription
  Dues payments
  Gifts
- Report missing issues or membership cards
- Correspond about related matters

Please write to our computer data center where all these records are maintained and processed:

SMITHSONIAN MEMBERSHIP-SUBSCRIPTION DATA CENTER
P.O. BOX 2955
BOULDER, COLORADO 80322
TELEPHONE (303) 449-9609

TO CHANGE YOUR ADDRESS –

Send us an address label from a recent issue together with your new address, or fill in the information below. Please give us 6 weeks advance notice.

NAME _____

OLD ADDRESS _____

CITY _____

STATE _____ ZIP _____

NEW ADDRESS _____

CITY _____

STATE _____ ZIP _____

Additional reading

Around the Mall (p. 22)

George Henry Falkiner Nuttall and the Nuttall Tick Catalog by James E. Keirans, U.S. Department of Agriculture, 1985

Tick-borne Diseases and Their Vectors (conference proceedings), edited by J.K.H. Wilde, Edinburgh University Press, 1976

Alligators (p. 36)

The Alligator's Life History by E. A. McIlhenny, Christopher Publishing House (Boston), 1935

The Alligator and Its Allies by Albert M. Reese, G. P. Putnam's Sons, 1915

"The Alligator Revealed" by Leslie D. Garrick and Jeffrey W. Lang, *Natural History*, June-July 1977

"Temperature of egg incubation determines sex in *Alligator mississippiensis*" by Mark W. J. Ferguson and Ted Joanen, *Nature*, April 29, 1982

Reves Collection (p. 50)

The Wendy and Emery Reves Collection (exhibition catalog), Dallas Museum of Art, 1985

The Anatomy of Peace by Emery Reves, Pocket Books, 1946

Churchill, Taken from the Diaries of Lord Moran: The Struggle for Survival 1940-65 by Charles McM. W. Moran, Houghton Mifflin, 1966

Ice palaces (p. 62)

Ice Palaces by Fred Anderes and Ann Agranoff, Abbeville Press, 1983

A Forgotten Empress: Anna Ivanovna and Her Era by Mina Curtiss, Frederick Ungar (New York), 1974

Palace of Ice by Edward Blair, Timberline Books (Leadville, Colorado), 1977

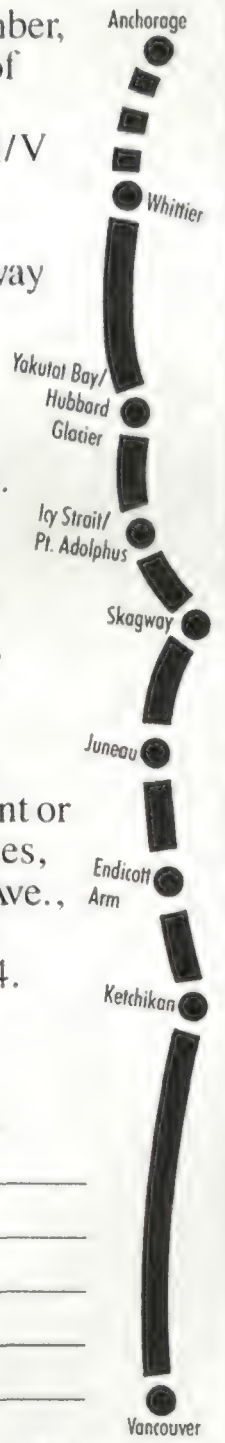
"A Lofty Ambition of St. Paul's Turns to Slush" by Kevin Klose, *Washington Post*, January 17, 1986

Book by Jan 31. Save up to $400 per cabin.

Alaska Explorer Cruises.

7 days through the Inside Passage & the Glacier Route

May to September, explore more of Alaska on the magnificent M/V Regent Sea: Ketchikan, Juneau, Skagway and *more* glaciers and wild wonders than regular Alaska cruises. Your ship is spacious and gracious, with superb cuisine, service and activities. Free brochure from your travel agent or Regency Cruises, 260 Madison Ave., NY, NY 10016 (212) 972-4774.



Please send me your free Alaska brochure:

Name _____

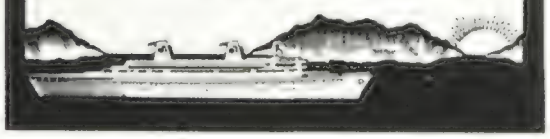
Address _____

City _____

State _____

Zip _____

REGENCY CRUISES
Ship's Registry: Panama



500 FREE WIGS

To 500 Women Who Send for Our FREE Catalog.

Mail this coupon for our FREE Catalog of the world's finest fashion wigs.

On March 1, 1987, we will draw 500 names of those who send for our catalog. Winners may choose any wig from our catalog priced up to $80... FREE!

Mail Coupon Today.

No Cost or Obligation. Nothing to buy.
Limit one entry per person.

Name _____ (Please Print)

Address _____

City _____

State _____ Zip _____

Have you ever worn a wig? ☐ Yes. ☐ No.

Paula Young® Dept. 714, P.O. Box 246 South Easton, MA 02375

Copyright © 1987, Paula Young®

7

MothersWork™

EXECUTIVE MATERNITY

Catalog with swatches and fit guide $3, refundable with order. Visit our stores in: **Atlanta, Baltimore, Boston, Charlotte, NC, Chicago, Cleveland, Costa Mesa, CA, Dallas, Denver, Harrisburg, PA, Hartford, CT, Haverford, PA, Houston, Los Angeles, Mesa, AZ, Minneapolis, New Orleans, New York, Philadelphia, Pittsburgh, San Diego, San Francisco, Stamford, CT, Washington, D.C.** or inquire about opening a store. Telephone 215-625-0151. P.O. Box 40121 Dept. SN7A, Phila., PA. 19106.

日本刀 JAPANESE SWORDS

For Free Evaluation Sheet

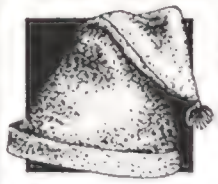
TOLL FREE 800-435-5119

$200 $10,000 CASH PAID

Japanese Military Decorations & Oriental Porcelains Also Wanted

David E. J. Pepin—Member NBTHK, Tokyo, Japan
Dept. SI, P.O. Box 354, Grant Park, IL 60940

The Traditional Nightcap



The red cotton flannel classic in luxurious double layers to really keep you warm in bed. *(Physiologists have measured that 30% of body heat is lost through the scalp!)* **Home-made and hand-finished;** adjustable for snug fit. **$7.95 ppd.**

Putnam Antiques
6 Pond Rd., Middlefield, Mass. 01243

GALAPAGOS

You, 9 others and our licensed naturalist will sail by yacht to explore more islands than any other Galapagos adventure. 44 trip dates. Machu Picchu option.
FREE BROCHURE
INCA FLOATS 415-435-4622
1606S Juanita, Tiburon, CA 94920

ODOR-FREE LITTER BOX

Powerful charcoal air filter eliminates all odor!

Litter odors are absorbed 100% by the unique disposable air filter scientifically treated with high grade odor absorbing activated charcoal.

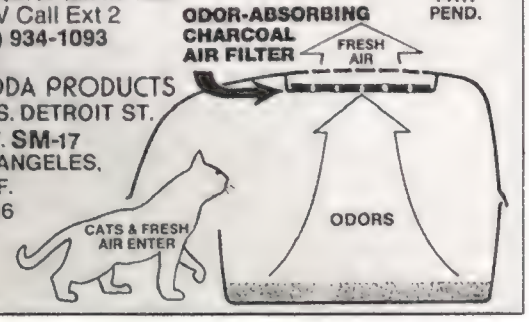
BOODABOX®
Guaranteed 100% odor-free

UNCONDITIONAL 30 DAY MONEY BACK GUARANTEE

- Appeals to cats' privacy instincts • Ends litter scatter • Conceals litter • Just lift top to clean pan • Unbreakable • Rich Almond Beige top, Mocha Brown pan • Deluxe textured finish • Roomy 27"L x 16"W x 17"H • 8"deep pan • Cats love the private 8" x 14" canopy entry • Filters last 6 months, $3.95/ea. (about 2¢ a day) • 1 filter and reorder forms included • Pan liners available

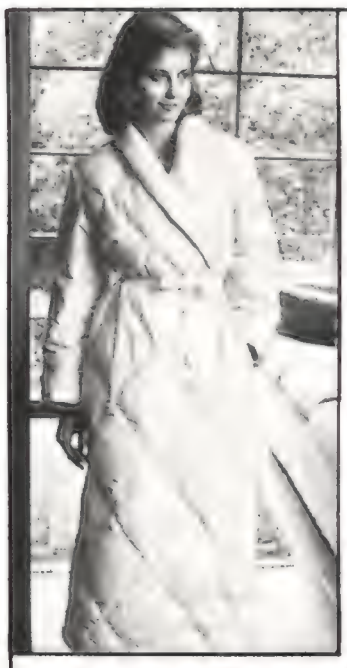
$34.95 + $4.00 Shipping, Check or M.O.
Add $2.10 tax in Calif.
MC/V Call Ext 2
(213) 934-1093

PAT. PEND.



BOODA PRODUCTS
439 S. DETROIT ST.
DEPT. **SM-17**
LOS ANGELES, CALIF.
90036

Goose down robe



Surround yourself in warm, lightweight elegance. Superblend fabric for easy care. Contrasting piping, shawl collar and roll back cuffs. Fully guaranteed. Order cream, peach, light blue or salmon. Sizes XS, S, M, L
Regularly $160
Sale $89
Shipping and handling, $4

Goose Down Slippers match robes in cream, peach, light blue or salmon. Sizes XS, S, M, L. Regularly $36 **Sale $21** Shipping $2.50

☐ Order by phone with MC or VISA, call 415/472-2154.
☐ Use MC, VISA or check for mail orders. CA residents add 6% tax

WARM THINGS

180 Paul Dr., Dept. SO /San Rafael, CA. 94903
415/472-2154 —48 Hr. Service — MC and VISA

Urban plants (p. 72)

"Amazon Rain-Forest Fires" by Robert L. Sanford jr. et al., *Science*, January 4, 1985

The Tropical Rain Forest: An Ecological Study by P. W. Richards, Cambridge University Press, 1952

Tikal: A Handbook of the Ancient Maya Ruins by William R. Coe, University Museum of the University of Pennsylvania, 1967

Scientific balloons (p. 82)

"A Visit to the National Scientific Balloon Facility, Palestine, Texas" by Diane Johnson, *Weatherwise*, October 1978

Aerospace Balloons: From Montgolfiere to Space by Edward J. Kirschner, Aero Publishers (Fallbrook, California), 1985

"A Perch in the Sky" by Tracy Kidder, *Science 83*, March 1983

"Astronomical Ballooning" by Sten Odenwald, *Astronomy*, August 1984

"Exploring Space with Balloons" by Dave Dooling, *Space World*, October 1983

Spanish treasure (p. 96)

The Funnel of Gold by Mendel Peterson, Little Brown, 1975

The Treasure of the Concepción by Peter Earle, Viking, 1980

The Spanish Seaborne Empire by J. H. Parry, Knopf, 1969

The Mediterranean and the Mediterranean World in the Age of Philip II (2 vols.) by Fernand Braudel, Harper Colophon Books (New York), 1972

Shell flowers (p. 106)

Shell Art: A Handbook for Making Shell Flowers, Mosaics, Jewelry, and Other Ornaments by Helen K. Krauss, Hearthside Press (New York), 1965

The Romance of Shells in Nature and Art by Louise Allderdice Travers, M. Barrows (New York), 1962

Shellcraft by Cleo M. Stephens, Chilton (Radnor, Pennsylvania), 1974

Esperanto (p. 112)

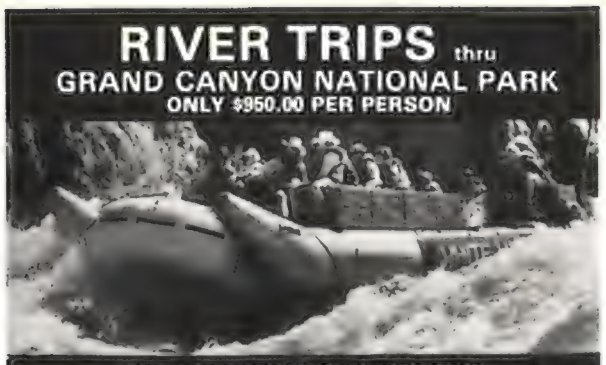
The Artificial Language Movement by Andrew Large, Basil Blackwell (New York), 1985

The Esperanto Movement by Peter G. Forster, Mouton (New York), 1982

Teach Yourself Esperanto by John Cresswell and John Hartley, David McKay (New York), 1968

Basic English: International Second Language by C. K. Ogden, Harcourt Brace, 1968

ELNA Newsletter, Esperanto League for North America (El Cerrito, California)



THE ADVENTURE OF A LIFE TIME
FAMILIES, SINGLES & GROUPS!
One week deluxe package includes round trip transportation from Las Vegas plus all meals and supplies.
For free full color brochure contact:
WHITE WATER RIVER EXPEDITIONS, INC.
P.O. Box 1269M • Mariposa, CA 95338 • (209) 742-6633
Authorized by the U.S. National Park Service

KITES
FREE COLOR CATALOG!
Have the best flying kite in the sky.
Choose from over 140 unusual kites.
Call or write for your catalog today!
Into The Wind • (303) 449-5356
2047-R Broadway, Boulder, CO 80302

Carved Furniture at big Discounts
Many pieces copied from palace originals. Furniture you can't find at the corner store; it's unique!
Shipped direct from factory to you. Send $1 for 80 page catalog, showing vast selection.
MAGNOLIA HALL
726 Andover (Dept S-17)
Atlanta, GA 30327

Wildlife & Cultural Expeditions!
combining adventure, learning and vacation to more than 30 unique areas worldwide.
For free brochure write
Nature Expeditions International
Box 11496 • Dept.SM • Eugene, OR 97440 • (503) 484-6529

IRELAND
PHOTOGRAPHIC WORKSHOPS
For detailed information please contact
RON ROSENSTOCK
91 SUNNYSIDE AVE. • HOLDEN, MA 01520

World's Oldest (and Fastest?) Computer
Handsome Chinese Abacus
Polished Solid Brass
$8.95
Marble Base

Novel Gift!
Authentic imported hand-made Oriental Abacus. Looks mysterious, but use it immediately. Many add, subtract, and compute faster on this than on electronic calculator!
Amaze & Amuse Friends Doing Rapid Calculations!
Totals Up to 999,999,999
A useful desk ornament, paperweight and conversation piece. 3-1/2× 2-1/4" by 3/4" high. With instructions. Money back if not delighted. Each $8.95. 3 or more, $7.50 each. Add $1.75 shipping. Call (313) 779-2888 for quantity prices.
Wordsworth 27421 Harper, St. Clair Shores, MI 48081

Smithsonian highlights

Planning a Smithsonian visit?

The Associates' Planning Packet, chockfull of helpful information, is yours for the asking; call or send postcard to Associates' Reception Center, Smithsonian Institution, Washington, D.C. 20560; (202) 357-2700 or TDD for hearing impaired (202) 357-1729. Begin your visit at the Associates' Reception Desk in the Castle, where from 10 A.M. to 4 P.M. daily, you will receive a cordial welcome, printed materials in a handy bag, and full details about your benefits.

To find out more information about any of the exhibitions or activities listed below, call (202) 357-2700.

Special January exhibits and events

National Portrait Gallery
Man of the Year: Portraits from the Time Collection (January 1-June 1988) Notable covers beginning with the 1927 portrait of Charles Lindbergh.

National Museum of Natural History
Portraits of Nature: Paintings by Robert Bateman (January 17-May 17) See *Highlights continued.*

National Museum of American Art
Modern American Realism: The Sara Roby Foundation Collection (January 23-August 14) One hundred works.

Hirshhorn Museum & Sculpture Garden
Recent Acquisitions: 1983-1986 (through March 1) Works by Siah Armajani, Anselm Kiefer, others.

Cooper-Hewitt Museum (New York)
Perspective: The Illusion of Space (through March 1) Drawings, prints, peep shows, printed fabrics.

Official America's Cup 1987 Posters

"Duel 87" Keith Reynolds' original 7-color serigraph 24" x 18" Plate signed $35. Signed by Artist $55.

"Down Under" by Ken Cato, leading Australian designer 19½" x 29" $25.

"Reaching Spinnakers" Australian Artist Stewart Merrett's first U.S. work 35½" x 24" $30.

I am ordering the following Official America's Cup Posters
"Duel 87" Qty_____ @ $35. Qty_____ @ $55.
"Down Under" Qty_____ @ $25.
"Reaching Spinnakers" Qty_____ @ $30.
Postage and Handling $3.50/order
Check ☐ VISA ☐ MC ☐ AE ☐
Card No. _____
Exp._____ Signature _____
Name _____
Address _____
City _____ State _____ Zip _____
Mystic Seaport Museum Stores
Dept. D207 Mystic, CT 06355-0990
Official Publishers of America's Cup Art
(203) 536-9677

CRUISE THE ALASKA THE BIG SHIPS CAN'T.

ABOARD THE *EXPLORER STARSHIP*, THE NEWEST ULTRA-DELUXE SMALL CRUISE SHIP IN THE WORLD!

In 7 nights, cruise Alaska's Inside Passage and Prince William Sound! From Prince Rupert to Anchorage, you'll see more glaciers, more wildlife, more of the real Alaska! All in the wonderful luxury of the new *Explorer Starship*, with just 249 fellow adventurers. For reservations or free brochure, see any travel agent, mail coupon or call toll-free 1-800-426-0600 (in Seattle 624-8551).

Bahamian Registry

Please send my Starship Alaska Cruises & Tours brochure.
1500 Metropolitan Park Bldg., Dept. DFG, Seattle, WA 98101

Name _____

Address _____

City _____ State _____ ZIP _____

EXPLORATION CRUISE LINES
ONE OF THE ANHEUSER-BUSCH COMPANIES

SWISS ALPS

Moderate DAY hiking tours, 2 or 4 weeks. Ride up above tree line and hike down. Over 50 optional length hikes basing one week at 10 charming mountain villages in 3 or 4 star hotels. Write for free brochure.

ALPINE ADVENTURE TRAILS TOURS
783H Cliffside Dr.
Akron, OH 44313
swissair

WILDLIFE - ARCHAEOLOGY EXPLORATIONS

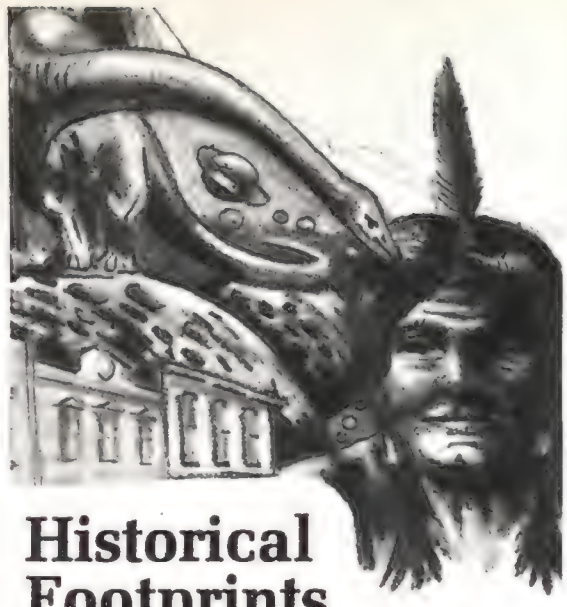
Assist Scientists in the field as they do research in No./So. America, Europe, Asia & Africa. Tax deductible. Free Brochure.

INTERNATIONAL RESEARCH EXPEDITIONS
415 California Ave., Palo Alto, CA 94306
(415) 323-4228

Beauty, energy efficiency and design freedom. That's why we're a cut above in every detail. Send $7.00 to Lindal Cedar Homes and get 2 idea books filled with color photos and over 90 different plans. Write or call toll free and use MasterCard or VISA.

1-800-426-0536.

LINDAL CEDAR HOMES
P.O. Box 24426, Dept. M17, Seattle, WA 98124 (206) 725-0900



Historical Footprints video magazine keeps you current for only $29.95

Starting with our first edition, which is available now, we will send you a 60 minute video magazine tape with the latest news in archeology, anthropology, geology and history.

Every 90 days, Historical Footprints will send you another video magazine update, featuring 10-15 segments on the latest findings, research, theories, restorations and re-enactments.

This collectable series is a must for the novice or serious historian—an ideal addition to your classroom, library or personal study.

The newest of history, a series of four video magazine tapes each year, is available at a special introductory annual subscription of $119.80, only $29.95 for each tape, (a savings of $40.00), or single copies at $34.95, a savings of $5.00. Postage and handling included. Refund for unused portion of annual subscription if cancelled at anytime.

To order, call toll free 1-800-835-2246, ext. 448; in Kansas, 1-800-362-2421; or use coupon. Visa and MasterCard accepted.

Historical Footprints

Historical Footprints
Dept. 187
Box 694
Lead, South Dakota 57754

- ☐ Annual subscription (four 60 minute tapes at $119.80, or $29.95 each)
- ☐ Send Vol. 1, No. 1 tape at $34.95
- ☐ VHS ☐ Beta
- ☐ Check enclosed ☐ Visa ☐ MasterCard

Card No. _____ Expires _____

Signature _____

Send to _____

Address _____

City _____ State _____ Zip _____

South Dakota residents, add 4% sales tax.

(Please photocopy coupon for additional orders)

National Air and Space Museum

Starlight Serenade (January 21; 8 P.M., Albert Einstein Planetarium) Renaissance music by U.S. Air Force Chamber Players. *Star Heroes: Space Fiction Film Series* (Eight Friday evenings beginning January 9; 7:30 P.M.) New and old classics.

Other January events

Smithsonian on the air

Radio Smithsonian: Features on this weekly half-hour series include elephants in India and the American labor movement. *Smithsonian Galaxy*: Short radio features. *Here at the Smithsonian*: Three-minute TV features look behind the scenes.

To find out what stations in your area carry these programs, write: Office of Telecommunications, MAH Room BB40, Washington, D.C. 20560.

Musical Weekend

Highlights of the 15th Musical Weekend, May 1-3, will include the Smithsonian Chamber Players in concert using authentic period instruments; the National Symphony Orchestra with Kathleen Battle as soloist, and dinners in the Arts and Industries Building and the Renwick Gallery. For further information, write: Musical Weekend, Room 4124 NMAH, Smithsonian Institution, Washington, D.C. 20560.

Lecture and Seminar Program

The National Associates Lecture and Seminar Program will begin its 1987 tour season in Florida. Smithsonian events in Jacksonville, January 28-February 1, will feature programs on American art, marine science and aviation; and an evening performance of Afro-American music. In Gainesville, from February 1-5, the series will include lectures on aviation and fossils, a seminar on nature photography and a special concert of American folk songs.

For more information, write to the Lecture and Seminar Program, Smithsonian, 1100 Jefferson Drive, Washington, D.C. 20560, or call (202) 357-1350.

Contributing Membership Program

The Contributing Membership supports the Institution's work in education, research and scholarship. Membership categories are: Supporting, $60 (available

BE ALMOST 2" TALLER!!

SIZES: 5-11
WIDTHS: B-EEE
FINE MEN'S SHOES

Look just like ordinary shoes except hidden inside is a height increasing innermold. Wide selection available including dress shoes, boots, sport shoes and casuals. Moneyback guarantee. Exceptionally comfortable. Call or write today for your FREE color catalog. "MD. RESID. CALL 301-663-5111"

TOLL-FREE 1-800-343-3810
ELEVATORS®
RICHLEE SHOE COMPANY, DEPT. SM71
P.O. BOX 3566, FREDERICK, MD 21701

TEDDY BEAR
Address Labels

(half size)

This little brown Bear, printed with your name & address or slogan, adds a smile to letters, books, luggage, tapes, promotions.
Bear shape...Self-stick
100 for $8.70 or 200 for $11.90 ppd.
BEARS, Box 735-E, Acton, Mass. 01720

"Oh beautiful city...
steeped in sentiment as she lies,
Spreading her gardens to the moonlight.
And whispering from her towers
The last enchantments of the Middle Ages."
–Matthew Arnold

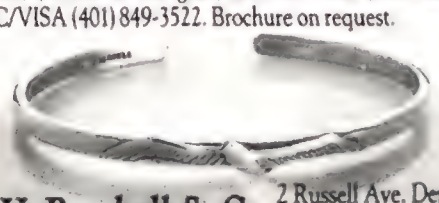
OXFORD AND CAMBRIDGE UNIVERSITY VACATIONS

The most prestigious and exciting one and two week cultural vacations for adults.

Write for free color brochure:
UNIVERSITY VACATIONS
U.S.A. Dept. S 9602 N.W. 13 St.
Miami, FL 33172
TOLL FREE 800-792-0100

SILVER SEAGULL

Newport Silversmith James Breakell captures the grace and beauty of the seagull's flight in this lovely bracelet. In sterling silver, $25.00. In 14k gold, $225.00. Add $4.00 handling. MC/VISA (401) 849-3522. Brochure on request.



J.H. Breakell & Co.
2 Russell Ave. Dept. SMS
Newport, RI 02840

World's Largest Bronze Supplier
FREDERIC REMINGTON BRONZE COLLECTION

"Stampede"
Jewelry Auction, Inc.
4305 U.S. Highway 17-92
Casselberry, FL 32707
1-800-521-3179/305-339-9103
Call for catalog. Postage and handling $3.00

only to non-Washington, D.C.-area residents); Donor, $125; Sponsoring, $300; Sustaining, $600; Patron, $1,200; and James Smithson Society, $2,000. (Contributions are tax-deductible within legal limits.) In addition to all benefits of Smithsonian Associates, Contributing Members enjoy special privileges. For more information, write the Contributing Membership Program, Smithsonian, Washington, D.C. 20560.

Exhibition catalogs

Catalogs available at this time include:

Engines of Change: The American Industrial Revolution, 1790-1860 (cloth, $39.95; paper, $19.95)

Portraits of Nature, Paintings by Robert Bateman (paper, $17.50)

To order, send check or money order to Museum Shops, Box 44083, Washington, D.C. 20026-0083. Include 15 percent of total purchase to cover postage and handling (minimum, $1.75).

Resident Associate Program

To become a Resident Associate, or to find out about the many other activities presented monthly, or for fee and ticket information, call 357-3030. Here are some January events:

Two From Down Under (January 13 and 20; 8 P.M.) Films: *For Love Alone*; *Sylvia*.

MLK—We Are the Dream (January 18; 7:30 P.M.) Actor Al Eaton.

Opening Concert: Pro Musicis Series (January 25; 7 P.M.) Flutist Robert Dick and pianist Kenneth Bowen.

An Evening With Michael Feinstein (January 25; 7:30 P.M.) Songs from the American musical theater.

Smithsonian Institution Traveling Exhibition Service

SITES circulates exhibitions to hundreds of cities outside Washington. To sponsor a show in your community, write SITES, Smithsonian, Washington, D.C. 20560. Here are some January exhibits:

Chicago (January 1-February 8) *Remaking America: New Uses, Old Places*, Daley Civic Center.

Grand Junction, Colorado (January 31-March 15) *Treasures of the Land: New Zealand Craftsmen and Their Native Materials*, Mesa College.

Statesboro, Georgia (January 24-February 28) *We'll Never Turn Back*, Georgia Southern Colonial Museum.

NE
The New England Collectors Society
Presents Its
First Porcelain Heirloom Doll
"The Little Dutch Girl"

Fine Bisque Porcelain
Entirely Hand Crafted

- **Authentic Dutch costuming.**
- **Complete with deluxe doll stand.**
- **Certificate of Registration.**
- **Priced at only $14.50**

Collecting fine porcelain heirloom dolls is now enjoying unprecedented popularity. Demand for quality heirloom dolls has *never* been greater!

"The Little Dutch Girl" is the First Porcelain Doll ever issued by the New England Collectors Society. As a First Edition, it is destined to have lasting value.

This enchanting "Little Dutch Girl" is handcrafted of bisque porcelain, then painted entirely by hand so that even the tiniest details are astonishingly realistic! And every facet of her beautifully hand sewn blue and white costume has been thoroughly researched to assure its total authenticity.

A Certificate of Registration will accompany each doll. © NE 1986

NE **The New England Collectors Society, Inc.**
237 Saw Mill Road P.O. Box 414
West Haven, Conn. 06516 DG0160

Please enter my order for the First Porcelain Doll **"The Little Dutch Girl"**. I have enclosed my remittance as follows:

_____ doll(s) @ $14.50 each $ _____
Shipping & Handling @ $1.95 per doll $ _____
Total Amount Enclosed* $ _____
*Connecticut residents remit $17.68 per doll to include sales tax.

Name _____
Address _____
City _____
State _____ Zip _____

☐ Please check if you wish to have any doll shipped to a different address and indicate specific instructions on a separate sheet of paper.

Make check or money order payable to The New England Collectors Society.

Satisfaction Guaranteed or money refunded within 30 days.
Please allow 8 to 10 weeks for shipment.

The New England Collectors Society is a subsidiary of *Reed & Barton*— fine silversmiths since 1824.

Robert Bateman's incisive eye

This month, an exhibition that has been long awaited by wildlife lovers opens at the National Museum of Natural History: entitled "Portraits of Nature: Paintings by Robert Bateman," it is the most complete retrospective to date of this popular Canadian artist's work. The exhibit was organized by botany curator Stanwyn Shetler; his catalog for the show has been published by the Smithsonian Institution Press.

The ideal way to view the exhibit is with a copy of the catalog in hand; it contains a background essay for each section of the show. Using Bateman's paintings as a focus, Shetler discusses the richness of the world's animals and the "naturescapes" in which they live. He also reflects on their plight. Writing, for example, about the majestic elephant that Bateman painted while on safari in Africa (below), he asks, "Is the defiant *Bluffing Bull* leading the parade of the animals in an elephant walk into the jaws of extinction or the ark of safety?"

Bateman, who lives with his family on a wooded island near Vancouver, has never tired of his subjects. He sees them as endlessly fascinating. "Maybe every animal in the world—even every cricket—has its own individual face," he says today; "and we are just such clods that we aren't tuned in to it."

Constance Bond

Bateman painted *Bluffing Bull*, shrouded in mist, during a 1979 safari through Amboseli Park in Kenya.

Kittiwake Greeting, 1979, captures the intensity of a cliffside reunion after a seaward excursion.

Bateman showed gyrfalcon in dark-color phase to emphasize threatened status.

Red Fox on the Prowl, 1984: noticing some rabbits' tracks, it checks in case they are still around.

Join with other Smithsonian Associates

Travel and Study, at Home, Abroad . . . and

As a Smithsonian Associate, you can enjoy the benefit of culturally oriented experiences under the guidance of museum curators or visiting scholars. Your lively curiosity and broad interests have resulted in a comprehensive study program to meet many tastes and budgets.

Save on telephone rates: request tour brochures by calling (202) 357-4700 during low-rate hours.

Domestic Study Tours

Florida Springs February 6-10: Canoe the freshwater springs of central Florida and see the endangered West Indian manatee.

Hawaii February 7-19, February 21-March 5: Experience undersea wonders, great volcanoes, lush forests and whale watching.

Genius of Matisse March 12-14: With the National Gallery's blockbuster exhibition as centerpiece, enjoy a special weekend program on this 20th-century master.

Okefenokee and Suwannee River April 4-11: Canoe and camp in this wilderness sanctuary for millions of singing creatures.

Arizona in Spring April 12-20 or 22-30: Tour the Sonoran Desert and Chiricahua Mountains to see many species of unique Southwestern wildlife.

Big Bend April 14-23: Hike the spectacular canyon trails in this southwestern Texas wilderness park.

Delta Queen April 16-24: Take a steamboat journey into America's past on the lower Mississippi from New Orleans to Memphis.

National Air and Space Weekend May 1-3: Explore the past, present and future of air and space travel through special tours and lectures at NASM and its outreach facilities.

New York Architecture—From Cast Iron to Post-Modern May 14-17: Enjoy a weekend of walking tours, theater and a private cruise around Manhattan.

New England and Hudson River Cruise May 30-June 13: Aboard the *Newport Clipper*, sail from Boston to New York. Visit West Point, Nantucket and Newport, featuring an elegant dinner at the Vanderbilts' Marble House.

Bryce, Zion and the North Rim of the Grand Canyon June 4-14 and August 31-September 10: Hike canyon trails to admire foliage, wildlife and geological history.

Chicago June 10-14: Walking tours and special programs to study the city's stunning architectural legacies.

Civil War—the Eastern Theater June 18-28: Beginning in Washington, D.C., travel to Richmond, the Shenandoah Valley and Gettysburg to retrace the events of the war.

Grand Canyon July 3-13: View magnificent landscape while rafting down the Colorado River with expert boatmen.

Lewis & Clark Trail August 8-15: Enjoy Idaho's spectacular wilderness scenery as you follow portions of the overland 1805 trail by horse and vehicle.

Washington "Anytime" Weekend Discover your capital city in Smithsonian style with this convenient and economical two-night package. Be sure to visit the Matisse show, now through March 29. Reserve by phone with your Visa or MasterCard.

Foreign Study Tours

A Hike in New Zealand February 9-25: From Lake Te Anau to Milford Sound, discover wildflowers, crystalline lakes and snowcapped peaks on the Milford Track.

Yucatán Adventure February 12-24: Explore extraordinary Maya ruins in the company of a pre-Columbian archaeologist.

Costa Rica February 21-March 6: An expedition for nature enthusiasts to see flora, birds and wildlife in the American tropics.

Voyage to the Islands of the South Pacific February 21-March 10: Aboard the *Illiria*, travel from New Guinea to Fiji through three great island groups. Observe diverse cultures and traditional art; enjoy striking natural beauty.

Zapotec and Maya Mexico February 26-March 10: Traveling from the central highlands to the Yucatán Peninsula, discover ancient ruins and colonial cities.

Australia-New Zealand March 1-24: An intriguing introduction to the natural history and culture of the lands "down under."

The Valley of Mexico and El Tajín March 13-25: Sample rich, diverse cultures in and around Mexico City and Veracruz.

Kyoto Seminar March 14-29: Live Japanese-style. Field trips complement lectures on art, history, religion and language.

Sail the Pacific—a Smithsonian First! March 19-April 11: Sail aboard the tall ship *Sea Cloud* through the Panama Canal to the Galápagos and on to Easter Island.

Guatemala Adventure March 26-April 6: Explore distinct Maya civilizations from the highlands to the monumental cities of Tikal and Uaxactún in the Petén jungle.

Wales April 30-May 14: Residents offer you a very personal exploration of the unique Welsh landscape and culture with emphasis on literature and the arts.

Malaysia, Borneo and Singapore May 8-27: Explore Kuala Lumpur, Malacca, Sarawak and more—for 19 days of color, culture and camaraderie.

Shadows of the Past—Chateaus, Caves and Villages of the Dordogne May 9-23, September 12-26: Explore this fascinating region of France. Tour includes four days in Paris.

Irish Walk May 15-27 or September 24-October 5: Take day hikes through a variety of settings in the Ring of Kerry and Connemara.

Odyssey of Flight June 3-15: An aviation tour of England and France. See the world's finest aviation museums and flying demonstrations. Includes the Paris air show.

Wild Highlands of Scotland June 4-22: Enjoy the outdoors while studying about this area's cultural and natural history.

Montreal/Quebec July 7-18: Experience the charm and hospitality of France in the New World.

People's Republic of China Nine unique itineraries beginning in April 1987. Hike, travel by train, study decorative arts, visit Nepal and Tibet . . . tours for first-time and repeat China travelers.

Countryside Programs May to September: Explore scenic and historic areas in Hungary, England, Austria, France or Switzerland.

Write Smithsonian National Associates, 1100 Jefferson Drive, SW, Washington, DC 20560 or call (202) 357-4700 for tour brochures

in Washington

Smithsonian Seminars

Travel to Wisconsin this spring for specially arranged Smithsonian seminars at the EAA Aviation Center in Oshkosh and the University of Wisconsin in Madison. Join your fellow Associates, Smithsonian curators and other distinguished faculty for stimulating programs that focus on air and space science, biological diversity and native American history. Hotel accommodations for all seminars are optional.

EAA Aviation Center, Oshkosh
April 24-26

Aviation History, Technology and Restoration

Enjoy lectures by Smithsonian curators on the history of aviation and aircraft technology and participate in airplane restoration sessions where you'll see professional welding, woodworking, fabric and metalwork techniques at the home of Oshkosh's world famous annual Fly-In.

University of Wisconsin-Madison
May 28-31

Native Americans in U.S. History

Trace the history of Anglo-Indian relations in America from the early contact period through the creation of the Bureau of Indian Affairs. Learn about native Americans in the Civil War era, the Indian wars of the 1860s and 1870s, the establishment of reservations and today's self-determination movements. The seminar includes a visit to the nearby Oneida Nation Museum.

BioDiversity: Challenge in the Natural World

Explore the dramatic diversity of the Earth's biological resources and learn about current measures designed to halt the threat of extinction among endangered plant and animal species. Field trips to the International Crane Foundation and local ecological habitats are included.

Exploration in Space: Recent Past and Near Future

Learn about America's early satellite projects, lunar and planetary exploration, future space shuttle missions and plans for space stations of the 1990s during lectures, films and discussions with Air and Space Museum curators. Go behind the scenes at the University's Space Science Department where experts will acquaint you with current aerospace research projects.

or (202) 357-1350 for seminar brochures.

Learning the secrets of art can be as easy as ABC

Now, you can learn to paint or sketch for FUN and PROFIT.

No previous experience or special talent needed. It's easier than you think.

Expert artists from the Paris ABC School of Art show you what to do and how to do it. Learn the techniques from the Paris masters.

You can learn at home. And at your own speed. Send for you own copy of our free color booklet today. Send for the free facts • No obligation • No salesman will call. Mail coupon today.

Paris ABC School of Art Dept. 88 313 Nolana McAllen, Texas 78504
FREE INFORMATION: Please mail me FREE information about your art course. No salesman will call. FREE brochure.

Name (please print) _____

Street _____

City _____ **State** _____ **Zip** _____

AUDIO-FORUM® offers the best in self-instructional foreign language courses using audio cassettes, featuring those used to train U.S. State Dept. personnel. We have 130 courses in 47 languages, so we must have what you need.

Learn a foreign language on your own! Free Catalog

To get your copy:

Call toll-free: 1-800-243-1234

or fill out and send this ad to–

Audio-Forum
Room K121, On-the-Green
Guilford, CT 06437
(203) 453-9794

Name _____

Address _____ Apt. # _____

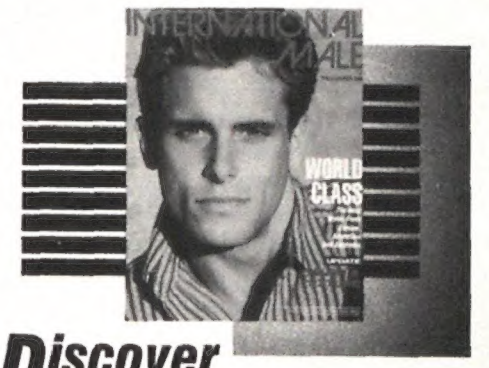
City _____

State/Zip _____

I am particularly interested in (check choice):

☐ Spanish ☐ French ☐ German ☐ Polish
☐ Greek ☐ Russian ☐ Vietnamese
☐ Bulgarian ☐ Turkish ☐ Hausa
☐ Other _____

A world of fashion!



Discover *the International Male Catalog/Magazine for absolutely the* ***hottest*** *new looks from Europe, America, the Orient and beyond! Progressive fashions for dress, sports and casual wear–plus fitness gear, underwear and grooming aids from around the world! A full year's subscription is just* ***$2*** *Refundable with first order.*

INTERNATIONAL MALE®

DEPT. 4902 • 2800 MIDWAY DR • SAN DIEGO, CA 92110
☐ *Enclosed find $2. Please send catalog.*

NAME _____

ADDRESS _____

CITY _____

STATE _____ *ZIP* _____

By Donald Dale Jackson

'The cat would never admit her mistakes'

When the kids go off to college, as everyone finds out, there is no one to yell at, no one to clean up after, no one to stay up late worrying about, nobody whose eyes you can glaze with unsolicited advice. Strange, unnerving silences fill the house. Bruce Springsteen and Phil Collins don't rock you to sleep anymore, the telephone rings only when the aluminum-siding salesman calls. On trips to the supermarket, parents discover there are entire aisles they can now ignore, junk-food causeways lined with chips and soda and Heavenly Hash.

In our house we coped uneasily with the radical change in our lives, vacillating between pleasure in the leisure it afforded and anxiety at suddenly being parents without portfolio. It was then that we began to look at our pets in a new light.

The dog and cat needed us. It seemed obvious that they required the guidance, discipline and advice that only we could provide. Admirable as they were in many respects, they had deficiencies of character that demanded attention. It's true that they didn't drive into the night with questionable companions or spend all their earnings on cassettes. But we saw there was plenty of room for improvement in behavior.

The cat, for example, would never admit her mistakes. When she did something clumsy, knock a key ring off the bureau or tip over the trash can, she'd always stand a few feet away and feign innocence. It was never *her* fault, and what was the big deal anyway? If the key ring got knocked off, it shouldn't have been there in the first place. When the cat did something unarguably mean she denied that, too. Me? Take a swipe at the dog's nose? You must be joking. Clearly the cat had to learn to take responsibility for her actions. It was a matter of maturity. We explained this to her. She looked at us calmly and then fell to swabbing her paw, the one she uses to intimidate the dog.

The dog was a willing but slow learner. She *wanted* to be better, God knows, and she knew that she fell short in many areas. The dog's trouble was her attention span. When she yielded to her basest instincts and chased an innocent squirrel around the yard or tore up the pillows on the porch, she was almost immediately overcome with shame. She begged our forgiveness with pitiful displays of groveling and abject apology. Ten minutes later, though, she would forget her transgression and the moral lesson that followed it.

My wife and I knew from experience that mature behavior is a consequence of gradually increased responsibilities and patient instruction. We gave the dog a bin for her toys, and told her it was her job to put them away when she was through with them. She nodded eagerly, raced to the bin and back a few times, and promised to obey. She indicated that she was thrilled by this conferral of trust. It was probably just overexuberance that caused her to overturn the bin and then forget about it completely.

Finding a chore the cat could do was trickier. The cat tended to reject the entire concept of responsibility. Unlike the dog, she didn't have any foolish toys, so that was out. If we were going to create a more mature cat we would have to be devious about it, to pretend that it was in her self-interest, which was in fact the only interest she acknowledged. We could make the moral connection—unselfishness, consideration of others and all that—later. After some discussion it was decided to make the cat responsible for warming the bed at night. This worked out well. She accepted the assignment without complaint and every night reported to her work station. She received our expressions of appreciation graciously. We plan to drive the behavioral lesson home, as soon as we can refine our presentation.

We realized, of course, that the additional pressures we were placing on the pets had to be balanced with rewards and demonstrations of confidence from us. This business of maturation is not a one-way street. Now when the dog hurls pillows around the porch but stops short of devouring them, we commend her for her restraint and give her a dog biscuit; psychologists call this "positive reinforcement." We let the cat sleep in a little longer in the morning as a reward for keeping the bed warm. These are subtle but effective mechanisms of guidance; we're in control here, no question about that. We've been a little surprised friends haven't noticed the pets' behavior as yet, but figure that will come, maybe with a sudden exclamation: "Wow, your pets have really grown up!"

We are fighting the temptation to be smug. Sometimes, I admit, we treat the pets, and even talk to them, as if they were children. When the dog rides with me in the car and we pass something interesting, I'll say, for instance, "That's a horse, Dulcie. *Horse.*" Sometimes Dulcie growls and jumps from the front seat to the back, glances at the horse—and then flicks her eyes back to the road ahead. Maybe it's an overreach.

We used to have our most important discussions at the dinner table—talks about independence and dependence, free expression and sharing, strength and weakness. But the pets do not take to this sort of thing. The dog tries to listen but grows impatient after 30 seconds. The cat stares blankly and then jumps onto a windowsill. I've noticed, too, that their expressions sometimes take on a familiar glazed look.

On the other hand, the kids will be home on vacation any day now.

SHARE THE SENSE OF *Rémy*

Exclusively Fine Champagne Cognac

Send a gift of Rémy anywhere. Call toll-free 1-800-531-9528.

Sole USA Distributor Première Wine Merchants, Inc. N.Y. 80 Proof. ©1986

© 1986 American Honda Motor Co., Inc.

The sound this magazine makes when you turn a page is louder than the Accord LXi moving at 55 miles per hour. HONDA